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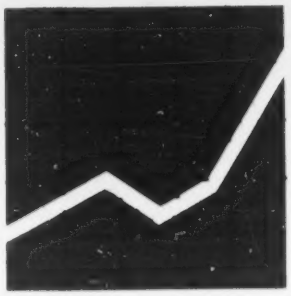

Colorado Business Review

BUSINESS RESEARCH DIVISION • GRADUATE SCHOOL OF BUSINESS ADMINISTRATION • UNIVERSITY OF COLORADO

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Volume LIII, Number 2, February 1980

The Colorado Ski Industry: An Overview

At the height of the 1979-80 ski season it is appropriate to look at the Colorado ski industry and review the performance of the 1978-79 season which is now history. Simply stated, 1978-79 was a banner year for skiing in Colorado. During last season the Colorado ski industry surpassed its previous record high of 6,648,866 skier visits, set in 1977-78, by recording an 8.5% increase, or 7,215,316 skier visits. Table 1 shows skier visits from 1958 forward and indicates the healthy growth in skier visits over the 21-year time span. Only three declines have been recorded, the most recent during the snow drought of the 1976-77 season when only 3,653,409 skier visits were recorded which was a 38.8% decline over the 1975-76 season. Good snow conditions correlate closely with skier visits. While some studies of western skiing have predicted a leveling off in growth, it appears that the growth in Colorado skiing has not yet reached the saturation point. It is interesting to note that seven areas (Table 2) recorded more skier visits in 1978-79 than were recorded by the entire industry in 1960-61.

A comparison of the three past seasons is provided in Table 2. Highlights of the 1978-79 season include:

1. Increases over the 1977-78 season were reported by 23 of the 29 Colorado Ski Country USA member areas. The six areas showing declines in lift tickets sold were Eldora (-21.1%), Ski Idlewild (-19.9%), Loveland (-18.0%), Wolf Creek (-11.2%),

TABLE 1
Skier Visits[a] for the State of Colorado

Season	Visits	Percent Increase
1958-59	386,298	— %
1959-60	458,549	18.7
1960-61	451,223	- 1.6
1961-62	571,125	26.6
1962-63	562,235	- 1.6
1963-64	817,518	45.4
1964-65	1,102,690	34.9
1965-66	1,168,159	5.9
1966-67	1,410,641	20.8
1967-68	1,813,210	28.5
1968-69	2,329,546	28.5
1969-70	2,741,101	17.7
1970-71	2,997,953	9.4
1971-72	3,260,155	8.7
1972-73	3,974,250	21.9
1973-74	4,304,787	8.3
1974-75	5,194,720	20.7
1975-76	5,965,172	14.8
1976-77	3,653,409	-38.8
1977-78	6,648,866	82.0
1978-79	7,215,316	8.5

[a]National Ski Areas Association defines skier visit as: One person visiting a ski area for all or any part of a day or night for the purpose of skiing. This is the total number of lift tickets issued. Skier visits include full-day, half-day, night, complimentary, adult, child, season, or any other ticket types that give a skier the use of an area's facilities. Where single rides or coupon books are an important source of revenue, equivalent skier days are computed from these sources. Each ticket sold for night skiing is included as a skier visit. Skier visits is an actual total count and includes season ticket use.

Source: Colorado Ski Country USA and U.S. Forest Service figures.

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and Hidden Valley (-0.4%). Arapahoe East was closed during the 1978-79 season.

2. Percentage increases were led by Ski Broadmoor (74.7%), Powderhorn (45.2%), Pikes Peak (38.5%), Geneva Basin (31.8%), and Crested Butte (25.3%).

3. Numerical increases were led by Vail (123,871), Winter Park (74,871), Steamboat (70,643), Copper Mountain (62,797), and Snowmass (54,138).

4. Vail continued to be the largest single contributor to lift tickets sold, issuing 1,172,478 during the 1978-79 season.

5. Once again, for the second straight year, all 13 of the vacation areas reported increases over the previous season. As a group they reported a 10.0% increase over the 1977-78 season.

6. The other day areas declined slightly (1.0%) over their record level in the 1977-78 season, as 5 out of the 13 areas reported losses. Weekend only areas rose 14.6% this season.

7. The Front Range areas reported a 6.6% increase in lift tickets over 1977-78.

Table 3 lists the top 10 ski areas ranked by lift tickets sold during 1978-79. Vail has reigned as the leading single area since the 1966-67 season and issued 1,172,478 lift tickets during 1978-79. Winter Park continued to hold down second place, issuing 739,569 tickets. Rounding out the top 10 were: Snowmass (699,568), Breckenridge (627,540), Steamboat (605,675), Keystone (554,693), Copper Mountain (536,184), Aspen Mountain (263,793), Crested

TABLE 2

Comparison of Lift Tickets Issued[a]

1976-77 to 1978-79

Member Areas	1976-77	1977-78	Percent Change 1977-78 Over 1976-77	1978-79	Percent Change 1978-79 Over 1977-78
Arapahoe Basin	96,403	148,199	53.7%	167,858	13.3%
Arapahoe East	1,848	3,374	82.6	—	—
Aspen Highlands	121,400	216,400	78.3	221,877	2.5
Aspen Mountain	106,658	241,943	126.8	263,793	9.0
Berthoud Pass	9,920	15,021	51.4	17,010	13.2
Breckenridge	287,005	623,292	117.2	627,540	0.7
Buttermilk	92,974	225,092	142.1	235,000	4.4
Conquistador	8,000	10,468	30.9	11,980	14.4
Copper Mountain	269,152	473,387	75.9	536,184	13.3
Crested Butte	108,542	207,631	91.3	260,088	25.3
Eldora	163,237	165,125	1.2	130,333	-21.1
Geneva Basin	2,656	38,449	1,347.6	50,684	31.8
Hidden Valley	15,962	45,171	183.0	44,995	- 0.4
Keystone	388,668	522,561	34.5	554,693	6.2
Loveland	195,280	210,324	7.7	172,479	-18.0
Monarch	57,959	93,714	61.7	100,015	6.7
Pikes Peak	11,535	3,226	-72.0	4,469	38.5
Powderhorn	19,386	43,220	122.9	62,751	45.2
Purgatory	19,065	218,019	1,043.6	258,659	18.6
Ski Broadmoor	25,623	15,817	-38.3	27,625	74.7
Ski Cooper	21,727	27,279	25.6	30,491	11.8
Ski Idlewild	17,557	24,807	41.3	19,877	-19.9
Snowmass	245,092	645,430	163.3	699,568	8.4
Steamboat	181,600	535,032	194.6	605,675	13.2
Sunlight	11,143	44,814	302.2	50,578	12.9
Telluride	8,054	88,752	1,002.0	105,522	18.9
Vail	685,351	1,048,607	53.0	1,172,478	11.8
Winter Park	456,543	664,698	45.6	739,569	11.3
Wolf Creek	25,069	49,014	95.5	43,525	-11.2
Total	3,653,409	6,648,866	82.0%	7,215,316	8.5%

[a]Lift tickets are those issued by Colorado Ski Country USA areas for the purpose of skiing any part of the day or night including half-day, child, complimentary, and season pass use and do not include spectator rides.

Source: Colorado Ski Country USA.

TABLE 3
Rank by Lift Tickets Issued

Ski Area	Lift Tickets Issued in 1978-79
Vail	1,172,478
Winter Park	739,569
Snowmass	699,568
Breckenridge	627,540
Steamboat	605,675
Keystone	554,693
Copper Mountain	536,184
Aspen Mountain	263,793
Crested Butte	260,088
Purgatory	258,659

Source: Colorado Ski Country USA, Denver, Colorado.

Butte (260,088), and Purgatory (258,659). Falling out of last season's top 10 was Buttermilk. The top 10 accounted for 79.3% of total lift tickets sold during 1978-79. The Aspen Skiing Corporation's three Aspen areas (Aspen Mountain, Buttermilk, and Snowmass) maintained their position as the principal contributor to lift tickets sold, a position they regained in 1977-78 after falling to third in 1976-77. They issued 1,198,361 tickets.

Unfortunately, skier visit information is not available for all the Rocky Mountain states; however, some information is available for Utah and Idaho where skier surveys were conducted on the 1978-79 season (Utah) and the 1977-78 season (Idaho). In total, it was estimated[1] that Utah ski areas received approximately 2,238,000 skier visits during the 1978-79 season. This represents a 57.5% increase over the 1974-75 season and a 62.3% increase over the 1972-73 season, the only years for which figures are available. Comparative figures for Colorado show 7,215,316 skier visits during the 1978-79 season, which represents a 38.9% increase over the 1974-75 season and an 81.6% increase over the 1972-73 season. An estimated 1,170,840 visitor days were recorded at 21 Idaho ski areas during the winter of 1977-78. Idaho residents accounted for 58% of the total. One ski area, Sun Valley, accounted for 38% of all visitor days.[2]

In the final analysis, the record-breaking 1978-79 season was good for the industry and the state. Preliminary reports on the 1979-80 season indicate more and more skiers are finding that Colorado is truly Ski Country USA with great snow, quality facilities, and apres ski excitement, as skier visit totals are running ahead of 1978-79. It has been a pleasure to observe the growth of the industry to the point where it is making a major contribution to the economy of the state. The industry is especially desirable because it attracts visitors during the winter months when other outdoor recreational activities such as sightseeing, camping, fishing, and golf are experiencing an "off season." The ski industry, with its related activities and supporting services, drives the winter recreation industry. Skiing favorably impacts the state's economic base and provides employment and income in the rural areas of the state where development opportunities are needed. Other industries and businesses have developed to serve the ski communities, strengthening their economic foundations and contributing dollars toward community improvement.

1 *Ski Utah! A Report of the Industry, 1978-1979*, John D. Hunt and Gary Cadez, Institute of Outdoor Recreation and Tourism, Utah State University, Logan, Utah 84321, 1979, $15.

2 *Idaho Ski Study, Winter 1977-1978*, Joseph E. Hoffman, et al., Wildlife Recreation Management Department, College of Forestry, Wildlife and Range Sciences, University of Idaho, Moscow, Idaho 83843.

SKIING PUBLICATIONS AVAILABLE

NSAA Economic Analysis of North American Ski Areas (1978-79 season) $30
Colorado Ski Industry Characteristics and Financial Analysis (1978-79 season) $25
Colorado Ski and Winter Recreation Statistics, 1978 . . . $20
The Colorado Skier (1977-78 season) $25
The Vail Skier (1977-78 season) $15
The Aspen Skier (1977-78 season) $15
The Airlines Skier (1977-78 season) $15
Bibliography of Skiing Studies, 5th Edition $10

Order from: Business Research Division
University of Colorado, Campus Box 420
Boulder, CO 80309

COLORADO BUSINESS INDICATORS

(Figures in Thousands Unless Otherwise Indicated)

	October 1979	September 1979	October 1978	Percent Change October 1979 from September 1979	Percent Change October 1979 from October 1978
Total Civilian Labor Force (by place of residence)[a]	1,405.5	1,398.8	1,362.8	0.5	3.1
Unemployment	42.9	41.8	44.6	2.6	- 3.8
Unemployment Rate (percent)	3.1	3.0	3.3	—	—
Employment	1,362.6	1,357.0	1,318.2	0.4	3.4
Nonagricultural Wage and Salary	1,209.8	1,201.2	1,168.7	0.7	3.5
Agricultural	46.3	49.7	46.9	- 6.8	- 1.3
Self-employed, unpaid family and domestics	106.5	106.1	102.6	0.4	3.8
Total Nonagricultural Wage and Salary Employment (by place of work)[a]	1,207.8	1,198.1	1,166.0	0.8	3.6
Mining	31.7	31.8	28.3	- 0.3	12.0
Metallic Minerals	10.6	10.6	9.7	0.0	9.3
Bituminous Coal, Lignite and Nonmetallic	5.4	5.4	4.6	0.0	17.4
Oil and Gas Extraction	15.7	15.7	14.0	0.0	12.1
Contract Construction	84.0	82.5	78.9	1.8	6.5
Manufacturing	182.7	182.0	172.6	0.4	5.9
Lumber, Wood Products and Furniture	7.9	8.0	7.7	- 1.3	2.6
Stone, Clay, Glass and Concrete Products	10.8	10.9	10.3	- 0.9	4.9
Primary and Fabricated Products	21.0	21.2	20.5	- 0.9	2.4
Machinery, Except Electrical	25.1	25.1	22.3	0.0	12.6
Electric and Electronic Equipment	13.5	13.3	12.2	1.5	10.7
Transportation Equipment	11.0	10.7	10.9	2.8	0.9
Other Durable Goods	23.5	23.6	22.0	- 0.4	6.8
Food and Kindred Products	28.7	28.2	27.5	1.8	4.4
Textiles and Apparel	4.8	4.9	4.6	- 2.0	4.4
Paper and Allied Products	1.8	1.8	1.7	0.0	5.9
Printing and Publishing	15.8	15.6	15.0	1.3	5.3
Chemicals and Allied Products	6.4	6.4	6.1	0.0	4.9
Other Nondurable Goods	12.3	12.4	11.9	- 0.8	3.3
Finance, Insurance and Real Estate	72.7	72.4	68.6	0.4	6.0
Banking	17.3	17.2	16.2	0.6	6.8
Credit Agencies and Other Banks	11.6	11.4	10.6	1.8	9.4
Insurance Carriers, Agents and Brokers	20.1	19.9	18.9	1.0	6.4
Real Estate and Combination Offices	19.9	20.0	19.4	- 0.5	2.6
Other Finance, Insurance and Real Estate	3.7	3.8	3.6	- 2.6	2.8
Transportation and Public Utilities	75.4	75.3	70.9	0.1	6.4
Railroad Transportation	7.4	7.5	7.1	- 1.3	4.2
Trucking and Warehousing	17.4	17.2	16.4	1.2	6.1
Air Transportation	12.1	11.9	11.3	1.7	7.1
Other Transportation	4.4	4.5	4.1	- 2.2	7.3
Communications, Electric, Gas and Sanitary Services	34.1	34.2	31.9	- 0.3	6.9
Trade	294.3	294.9	288.9	- 0.2	1.9
Wholesale Trade	69.4	69.2	66.6	0.3	4.2
Retail Trade	224.9	225.7	222.3	- 0.4	1.2
Services	242.2	242.0	236.8	0.1	2.3
Lodging and Combination Lodging/Eating Places	20.9	22.4	20.7	- 6.7	1.0
Personal Services	12.7	12.8	12.3	- 0.8	3.3
Business Services	43.8	43.6	42.2	0.5	3.8
Auto and Miscellaneous Repair Services	14.2	14.1	13.1	0.7	8.4
Amusements and Recreation	13.0	14.2	16.0	- 8.5	-18.8
Health Services	62.6	62.5	60.2	0.2	4.0
Educational Services	10.5	8.3	10.9	26.5	- 3.7
Membership Organizations	20.9	20.8	20.9	0.5	0.0
Other Services	43.7	43.4	40.5	0.7	7.9
Government	224.6	217.3	220.9	3.4	1.7
Federal	49.7	50.1	50.2	- 0.8	- 1.0
State	60.4	55.8	57.0	8.2	6.0
Local	114.6	111.4	113.7	2.9	0.8

	October 1979	September 1979	October 1978	Percent Change October 1979 from September 1979	Percent Change October 1979 from October 1978
Average Weekly Hours					
Construction	38.0	38.5	38.7	- 1.3	- 1.8
Manufacturing	39.4	39.6	39.0	- 0.5	1.0
Nondurable Goods	38.5	38.8	38.3	- 0.8	0.5
Durable Goods	40.1	40.2	39.5	- 0.2	1.5
Average Weekly Earnings ($)					
Construction	383.42	387.69	354.88	- 1.1	8.0
Manufacturing	271.47	272.45	246.87	- 0.4	10.0
Nondurable Goods	260.64	263.06	243.20	- 0.9	7.2
Durable Goods	279.50	278.99	250.03	0.2	11.8
Initial Unemployment Claims (000)	10.9	7.8	11.6	39.7	- 6.0
Bankruptcies, All Types (number)	318	362	361	-12.2	-11.9
Total State Revenue ($000)	244,717	290,118	253,673	-15.6	- 3.5
Total State Expenditures ($000)	237,877	274,673	206,455	-13.4	15.2
Crude Oil Production (thous. bbls.)	2,684	2,544r	3,139r	5.5	-14.5
Dry Gas Production (mil. cu. ft.)	10,430	10,699r	10,524r	- 2.5	- 0.9
Coal Production (thous. tons)	1,701.6	1,438.4	1,486.6r	18.3	14.5
New Oil and Gas Wells (number)	163	133	145	22.6	12.4
Natural Gas Used (bil. cu. ft.)	18.9	14.3	17.2	32.2	9.9
Electrical Power Sales (mil. kwh)					
Residential	395.6	417.4	382.6	- 5.2	3.4
Nonresidential	959.7	1,066.5	921.5	-10.0	4.2
New Construction, 52 cities					
Residential permits (number)	1,621	1,507	1,633r	7.6	- 0.7
Residential value ($000)	69,969	65,154	59,066r	7.4	18.5
Nonresidential permits (number)	215	148	126r	45.3	70.6
Nonresidential value ($000)	32,660	41,089	32,100r	-20.5	1.7
Highway Contractor Payments ($000)	21,772	9,301	18,159	134.1	19.9
Ordinary Life Insurance Sales ($000)	481,107	393,741	413,313	22.2	16.4
Bank Deposits, 119 cities, 239 of 299 banks					
Demand ($000,000)	4,691	4,668	4,377	0.5	7.2
Time and Savings ($000,000)	6,268	6,337	5,664	- 1.1	10.7
Savings and Loan Net New Savings ($000)	27,434	69,271	56,454r	-60.4	-51.4
National Park Visits (000)[b]	345.2*	699.9	390.3	-50.7	-11.6
Motor Vehicle Title Applications (000)	85.9	87.2	84.7	- 1.5	1.4
Highway Vehicle Traffic Counts at Border Stations (daily average)	33,143	38,718	36,106	-14.4	- 8.2
Air Passengers, Stapleton (000)[c]	1,631	1,657	1,475	- 1.6	10.6
Air Freight and Air Express, Stapleton (thous. lbs.)	21,179	20,303	22,749	4.3	- 6.9
Prices Received by Farmers ($)					
Beef Cattle (per cwt)	69.00	69.90	55.10	- 1.3	25.2
Lambs (per cwt)	66.30	66.90	60.90	- 0.9	8.9
Wheat (per bu.)	3.56	3.51	2.81	1.4	26.7
Corn (per bu.)	2.44	2.84	2.11	-14.1	15.6
Potatoes (per cwt)	2.64	2.85	2.54	- 7.4	3.9
Wool (per lb.)	.85	.81	.74	4.9	14.9

NOTES: An asterisk (*) indicates preliminary data subject to revision.
Revised data are marked (r).
n.r.—not reported

[a]Employment figures have been updated to a September 1977 benchmark and are arranged by 1972 Standard Industrial Classifications (SICs). Previously reported data were on a March 1974 benchmark utilizing 1967 SICs. Thus, these data are not comparable to that published prior.

[b]Shadow Mountain National Recreation Area's visits are not included in these figures as this area is now administered by the U.S. Forest Service.

[c]Includes scheduled airlines, commuter airlines and charter passengers.

Employment, Hours, and Earnings data from Colorado Department of Labor and Employment.

Bankruptcies from the Office of the Federal Referee in Bankruptcy.

State Revenue and Expenditures from the State Controller's Office.

Crude Oil Production, Dry Gas Production and New Oil and Gas Wells from the Oil and Gas Conservation Commission.

Coal Production from Colorado State Coal Mine Inspection Department.

Natural Gas Used from Colorado Interstate Gas Company.

Electrical Power Sales from individual companies.

New Construction from individual cities.

Highway Contractor Payments from the Colorado Highway Department.

Life Insurance Sales from the Life Insurance Agency Management Sales Report.

Bank Deposits from individual banks.

Savings and Loan Net New Savings from Federal Home Loan Bank of Topeka.

National Park Visits from individual areas.

Highway Traffic counts from Colorado Highway Department.

Air Passengers, Freight, and Express from Stapleton International Airport Business Office.

Prices Received by Farmers from U.S. Department of Agriculture.

LOCAL BUSINESS CONDITIONS

(All Figures in Thousands)

	October 1979	September 1979	October 1978
ALAMOSA (1978 pop. 8,000)			
Electric Power (kwh) ...	2,894	2,813	3,434
Deposits ($)—Demand .	23,064	21,864	21,587
(2 of 2 banks)—T&S ..	19,624	19,656	18,809
Constr. ($)—Res.	30	90	57
—Nonres. ...	50	0	0
ARVADA (1979 pop. 85,300)			
Electric Power (kwh) ...	25,055	24,413	23,359
Deposits ($)—Demand .	36,815	40,268	34,848
(3 of 4 banks)—T&S ..	35,440	36,075	36,010
Constr. ($)—Res.	976	823	2,501
—Nonres. ...	215	715	408
ASPEN (1978 pop. 7,500)			
Electric Power (kwh) ...	3,399	3,725	3,305
Deposits ($)—Demand .	16,159	16,325	15,112
(1 of 2 banks)—T&S ..	23,925	23,711	22,578
Constr. ($)—Res.	n.r.	108	0
—Nonres. ...	n.r.	0	8
AURORA (1979 pop. 151,900)			
Electric Power (kwh) ...	63,303	64,741	58,122
Deposits ($)—Demand .	41,701	43,140	39,852
(4 of 9 banks)—T&S ..	59,578	58,269	52,096
Constr. ($)—Res.	16,871	14,144	7,375
—Nonres. ...	4,417	1,995	1,052
BOULDER (1979 pop. 90,900)			
Electric Power (kwh) ...	45,743	49,914	49,421
Deposits ($)—Demand .	151,199*	145,679*	144,904
(8 of 8 banks)—T&S ..	241,327*	242,059*	225,237
Constr. ($)—Res.	1,446	1,774	3,751
—Nonres. ...	400	2,830	265
BRIGHTON (1979 pop. 12,000)			
Electric Power (kwh) ...	3,977	4,165	4,177
Deposits ($)—Demand .	19,867	19,160	18,706
(2 of 2 banks)—T&S ..	25,288	25,800	24,805
Constr. ($)—Res.	235	1,135	660
—Nonres. ...	0	0	0
BROOMFIELD (1979 pop. 23,200)			
Electric Power (kwh) ...	8,524	8,740	7,985
Deposits ($)—Demand .	15,584	15,671	15,304
(2 of 2 banks)—T&S ..	23,003	23,706	19,787
Constr. ($)—Res.	2,551	1,017	963
—Nonres. ...	0	0	326
BRUSH (1978 pop. 4,200)[a]			
Electric Power (kwh) ...	1,837	1,888	1,739
Deposits ($)—Demand .	12,950	14,878	11,263
(2 of 2 banks)—T&S ..	33,039	31,506	25,555
CANON CITY (1978 pop. 14,215)			
Electric Power (kwh) ...	22,069	23,065	20,652
Deposits ($)—Demand .	21,299	21,912	21,784
(3 of 3 banks)—T&S ..	52,353	51,258	46,266
Constr. ($)—Res.	269	470	175
—Nonres. ...	140	0	200
COLORADO SPRINGS (1978 pop. 201,700)			
Electric Power (kwh) ...	145,821	139,366	127,258
Deposits ($)—Demand .	286,911	282,542	271,592
(13 of 17 banks)—T&S	459,366	458,485	414,082
Constr. ($)—Res.[b]	10,471	9,043	8,979
—Nonres. ...	11,336	4,502	4,009
COMMERCE CITY (1979 pop. 16,000)			
Electric Power (kwh) ...	19,261	19,557	19,733
Deposits ($)—Demand .	9,840	9,534	9,319
(1 of 1 bank)—T&S ..	10,151	12,658	9,997
Constr. ($)—Res.	46	92	37
—Nonres. ...	501	541	96
CORTEZ (1978 pop. 8,200)			
Electric Power (kwh) ...	2,555	3,096	2,814
Deposits ($)—Demand .	16,706	17,488	16,555
(2 of 2 banks)—T&S ..	31,545	31,672	29,410
Constr. ($)—Res.	223	92	252
—Nonres. ...	405	0	0
CRAIG (1977 pop. 6,677)			
Electric Power (kwh) ...	4,146	4,118	3,592
Deposits ($)—Demand .	21,883	22,626	18,240
(2 of 2 banks)—T&S ..	34,236	33,167	26,247
Constr. ($)—Res.	933	535	282
—Nonres. ...	145	35	49
DENVER (1979 pop. 527,800)			
Electric Power (kwh) ...	307,406	319,578	297,182
Deposits ($)—Demand .	2,363,045	2,379,280	2,164,337
(29 of 34 banks)—T&S	2,498,119	2,574,514	2,290,183
Constr. ($)—Res.	6,416	4,092	4,759
—Nonres. ...	6,373	8,872	20,130
DURANGO (1978 pop. 14,100)			
Electric Power (kwh) ...	5,970	5,940	5,758
Deposits ($)—Demand .	35,830	37,604	34,973
(3 of 3 banks)—T&S ..	56,908	60,933	52,535
Constr. ($)—Res.	0	107	132
—Nonres. ...	1,030	174	556
ENGLEWOOD (1979 pop 33,000)			
Electric Power (kwh) ...	19,356	20,285	18,942
Deposits ($)—Demand .	117,490	117,810	109,359
(5 of 5 banks)—T&S ..	153,183	153,805	141,979
Constr. ($)—Res.	116	75	82
—Nonres. ...	473	50	40
ESTES PARK (1976 pop. 2,127)			
Electric Power (kwh) ...	3,659	4,495	3,623
Deposits ($)—Demand .	10,268	11,808	9,668
(2 of 2 banks)—T&S ..	19,255	19,629	18,446
Constr. ($)—Res.	24	387	64
—Nonres. ...	0	0	0
FORT COLLINS (1977 pop. 67,100)			
Electric Power (kwh) ...	26,643	31,840	27,856
Deposits ($)—Demand .	118,535	117,402	112,151
(6 of 6 banks)—T&S ..	199,828	197,795	183,758
Constr. ($)—Res.	6,213	5,203	3,443
—Nonres. ...	313	4,427	1,236
FORT MORGAN (1976 pop. 8,582)			
Electric Power (kwh) ...	4,550	8,670	n.r.
Deposits ($)—Demand .	20,766	20,348	20,790
(2 of 2 banks)—T&S ..	49,535	49,554	46,371
Constr. ($)—Res.	236	230	n.r.
—Nonres. ...	0	0	n.r.
GLENWOOD SPRINGS (1977 pop. 4,091)			
Electric Power (kwh) ...	3,636	3,878	3,616
Deposits ($)—Demand .	30,008	28,698	26,096
(2 of 2 banks)—T&S ..	55,741	55,731	48,209
Constr. ($)—Res.	n.r.	674	131
—Nonres. ...	n.r.	191	0
GOLDEN (1979 pop. 14,900)			
Electric Power (kwh) ...	5,315	5,750	4,766
Deposits ($)—Demand .	34,898	36,678	33,645
(2 of 2 banks)—T&S ..	62,009	61,108	52,167
Constr. ($)—Res.	1,016	948	232
—Nonres. ...	0	134	0
GRAND JUNCTION (1977 pop. 30,245)			
Electric Power (kwh) ...	15,870	17,526	14,910
Deposits ($)—Demand .	105,621	110,929	99,488
(5 of 5 banks)—T&S ..	152,237	148,720	120,702
Constr. ($)—Res.	735	992	408
—Nonres. ...	49	526	640
GREELEY (1977 pop. 58,900)			
Electric Power (kwh) ...	22,259	27,356	21,680
Deposits ($)—Demand .	94,997	100,107	93,139
(7 of 7 banks)—T&S ..	249,578	243,343	221,061
Constr. ($)—Res.	1,913	1,746	1,514
—Nonres. ...	158	170	270
GUNNISON (1978 pop. 6,000)			
Electric Power (kwh) ...	3,355	2,931	3,180
Deposits ($)—Demand .	16,639	15,653	14,843
(2 of 2 banks)—T&S ..	21,966	21,349	18,773
Constr. ($)—Res.	750	0	0
—Nonres. ...	0	0	0
LA JUNTA (1976 pop. 8,700)			
Electric Power (kwh) ...	4,347	4,395	3,896
Deposits ($)—Demand .	18,633	16,568	16,314
(1 of 2 banks)—T&S ..	17,831	17,875	15,619
Constr. ($)—Res.	0	63	0
—Nonres. ...	30	50	52

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LOCAL BUSINESS CONDITIONS—Continued

	October 1979	September 1979	October 1978
LAKEWOOD (1979 pop. 134,400)			
Electric Power (kwh)	50,155	44,982	49,147
Deposits ($)—Demand	170,550	143,898	146,609
(7 of 8 banks)—T&S	218,631	222,418	198,259
Constr. ($)—Res.	1,325	3,241	3,962
—Nonres.	4,133	1,139	142
LAMAR (1976 pop. 8,500)			
Electric Power (kwh)	5,345	7,859	5,151
Deposits ($)—Demand	14,762	15,734	17,177
(2 of 2 banks)—T&S	27,153	26,588	21,305
Constr. ($)—Res.	754	58	157
—Nonres.	0	0	50
LITTLETON (1979 pop. 34,100)			
Electric Power (kwh)	16,038	15,252	15,661
Deposits ($)—Demand	54,953	52,648	57,285
(3 of 3 banks)—T&S	93,560	96,921	86,005
Constr. ($)—Res.	648	1,247	1,340
—Nonres.	126	0	101
LONGMONT (1979 pop. 45,200)			
Electric Power (kwh)	18,025	17,944	18,145
Deposits ($)—Demand	53,225	51,572	51,114
(4 of 5 banks)—T&S	91,253	93,291	85,769
Constr. ($)—Res.	3,099	2,835	3,529
—Nonres.	605	1,498	948
LOVELAND (1978 pop. 31,986)			
Electric Power (kwh)	14,100	15,244	14,400
Deposits ($)—Demand	42,185	39,777	39,460
(4 of 4 banks)—T&S	75,585	74,767	66,347
Constr. ($)—Res.	4,075	1,737	2,689
—Nonres.	542	9,320	520
MANITOU SPRINGS (1978 pop. 4,900)[c]			
Electric Power (kwh)	1,163	1,339	1,226
Deposits ($)—Demand	3,670	3,892	3,832
(1 of 1 bank)—T&S	6,565	6,454	6,246
MONTROSE (1976 pop. 8,500)[d]			
Deposits ($)—Demand	30,317	26,512	25,959
(2 of 3 banks)—T&S	43,271	42,159	38,430
Constr. ($)—Res.	307	235	379
—Nonres.	0	95	283
NORTHGLENN (1979 pop. 33,000)			
Electric Power (kwh)	9,955	11,165	10,431
Deposits ($)—Demand	23,163	21,457	20,643
(2 of 2 banks)—T&S	30,843	30,742	25,221
Constr. ($)—Res.	0	n.r.	785
—Nonres.	0	n.r.	9
PUEBLO (1976 pop. 105,000)			
Electric Power (kwh)	49,535	53,447	48,754
Deposits ($)—Demand	120,939	121,158	125,462
(7 of 8 banks)—T&S	182,928	181,210	169,686
Constr. ($)—Res.	1,179	600	1,818
—Nonres.	328	230	128
ROCKY FORD (1976 pop. 5,250)			
Electric Power (kwh)	5,301	5,880	5,536
Deposits ($)—Demand	8,693	8,405	8,993
(2 of 2 banks)—T&S	7,615	7,759	6,973
Constr. ($)—Res.	0	0	0
—Nonres.	0	0	0
SALIDA (1978 pop. 5,354)			
Electric Power (kwh)	1,319	1,551	1,304
Deposits ($)—Demand	11,137	10,805	10,380
(2 of 2 banks)—T&S	20,942	20,608	17,319
Constr. ($)—Res.	177	528	34
—Nonres.	0	1,400	35
STERLING (1978 pop. 11,500)			
Electric Power (kwh)	6,070	6,353	5,471
Deposits ($)—Demand	32,751	30,331	30,073
(3 of 3 banks)—T&S	75,461	74,906	65,404
Constr. ($)—Res.	n.r.	59	267
—Nonres.	n.r.	0	0
THORNTON (1979 pop. 37,000)			
Electric Power (kwh)	13,698	13,862	12,339
Deposits ($)—Demand	11,881	12,923	11,352
(1 of 1 bank)—T&S	8,322	8,596	8,954
Constr. ($)—Res.	2,429	1,794	3,351
—Nonres.	404	0	360
TRINIDAD (1976 pop. 10,000)			
Electric Power (kwh)	2,737	2,819	2,695
Deposits ($)—Demand	16,222	14,709	16,192
(2 of 2 banks)—T&S	25,238	25,833	22,217
Constr. ($)—Res.	83	136	0
—Nonres.	0	0	0
WALSENBURG (1976 pop. 4,600)			
Electric Power (kwh)	1,065	1,169	1,075
Deposits ($)—Demand	5,461	5,753	5,140
(1 of 1 bank)—T&S	12,839	12,318	11,757
Constr. ($)—Res.	0	57	36
—Nonres.	0	6	6
WESTMINSTER (1979 pop. 54,300)			
Electric Power (kwh)	20,494	14,878	15,231
Deposits ($)—Demand	32,511	32,685	30,902
(2 of 2 banks)—T&S	36,626	37,945	34,121
Constr. ($)—Res.	3,942	5,972	3,823
—Nonres.	46	929	21
WHEAT RIDGE (1979 pop. 38,000)			
Electric Power (kwh)	21,309	23,123	15,814
Deposits ($)—Demand	21,486	22,035	19,360
(2 of 2 banks)—T&S	30,723	31,276	29,119
Constr. ($)—Res.	23	216	0
—Nonres.	298	1,065	0

[a]Construction figures are not available.

[b]Regional figures.

[c]Included in Colorado Springs regional construction figures.

[d]Electric Power consumption figures are not available.

NOTES: Population figures are estimates from regional council of governments, and individual cities.
T&S—Time and Savings Deposits
Construction figures are valuation of new residential and nonresidential construction only.
n.r.—not reported
*—preliminary data
r—revised data

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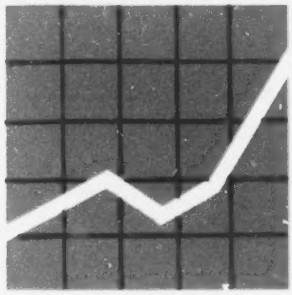

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Volume LIII, Number 3, March 1980

High Gasoline Prices or Rationing?

RALPH J. BROWN

INTRODUCTION

Recent international events in Iran and Afghanistan and the recent increases in petroleum prices by the OPEC nations raise the very possibility of severe petroleum supply disruptions in the near future. Fearing this possibility several mandatory gasoline rationing plans have been proposed.[1] Proponents of rationing generally argue that high gasoline prices do not provide sufficient incentives to conserve and that rationing is the only fair way of reducing consumption in times of tight supplies. A recent survey by the Conference Board found that 53% of the families surveyed favor gasoline rationing if the government is forced to reduce consumption and 90% were opposed to substantial jumps in gasoline prices as a means of discouraging consumption.[2]

The possibility of another petroleum crisis raises a number of important questions. Do high gasoline prices encourage conservation? How high might prices go if we were to suffer another supply reduction? What are the pros and cons of a mandatory rationing program?

The purpose of this article is to shed some light on these questions. We shall begin our investigation by reviewing standard economic theory. Then we will examine the empirical evidence relating to these questions, and finally we will discuss gasoline rationing in light of our theoretical and empirical findings.

Economic theory argues that high prices provide consumers with incentives to reduce their consumption of the high-priced good. The law of demand, one of the most widely tested theories in economics, states that the quantity demanded of any good is inversely related to its price. If the price of gasoline falls relative to all other prices, we would expect the consumption of gasoline to rise. If the price of gasoline rises relative to all other prices, we would expect the consumption of gasoline to fall. Therefore, the relevant price variable in explaining the quantity of gasoline consumed is the relative or real price of gasoline.

Naturally, the demand curve will change over time as real incomes and tastes change. For instance, as real incomes increase over time we would not be

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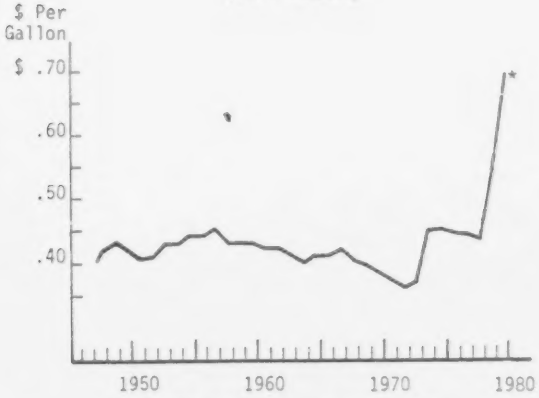
surprised to find that consumers would demand a greater quantity of gasoline even though its price has increased relative to all other prices. In other words, an increase in real income would tend to increase the demand for gasoline. This does not invalidate the law of demand, which posits an inverse relationship between relative prices and consumption; it merely means that our demand is higher at each price as a result of higher real incomes. There still remains the inverse relationship between relative prices and consumption for each level of real income.

Since economic theory stresses the importance of real prices as a principal determinant of demand, it is instructive to examine the behavior of the real price of gasoline over the postwar period. As shown in Figure 1, the real price of gasoline generally fell from 1957 to 1972. After rising sharply in 1973 and 1974, the real price fell until 1978 where it was about the same level as in 1955 and lower than in 1957. In 1979, real gasoline prices rose sharply to the highest level in the postwar period and have continued rising in 1980.

FIGURE 1
REAL PRICE OF GASOLINE*
1947-1980
(1972 Dollars)



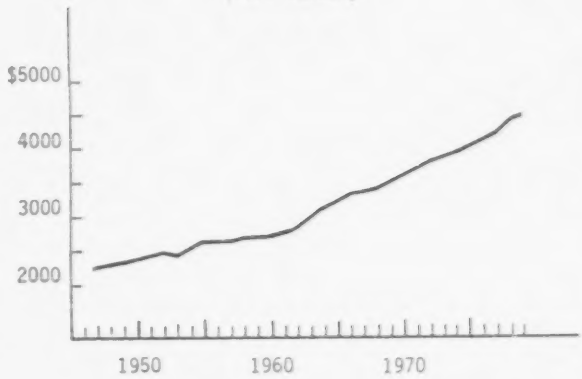
*Estimated through February 1980

Source: Bureau of Labor Statistics and Bureau of Economic Analysis

Another important factor which determines the quantity of gasoline purchased at each real price is the level of real income. Figure 2 shows the level of U.S. real per capita personal income since 1947. With the exception of most postwar recessions, the trend of real incomes has been up. For instance, since 1974 real per capita incomes have risen at an annual rate of 2.6%. The effect of rising real incomes is to increase the demand for gasoline.

This data suggests that falling real prices and increasing real incomes to 1972 were the primary forces increasing gasoline consumption during this period. The sharp real price rise and recession of 1973-1975 were forces moderating gasoline consumption. From 1974 to 1979 falling real prices and the recovery from the recession tended to increase gasoline consumption. However in 1979, the sharp real price

FIGURE 2
REAL DISPOSABLE INCOME
PER CAPITA
1947-1979
(1972 Dollars)



Source: Bureau of Economic Analysis

rise coupled with a slowing economy were forces behind the approximately 5% drop in gasoline consumption. The next section will attempt to better quantify these relationships using econometric modeling techniques.

ESTIMATING A GASOLINE DEMAND CURVE[3]

In order to better quantify the relationship between consumption and its determinants, economists often try to estimate econometrically a demand curve using actual data. Using the flow adjustment model[4] of demand we would expect that the consumer's short-run demand for gasoline is primarily determined by relative prices, real income, and the stock of gasoline-using capital (autos, trucks, etc.). Using this approach, the consumer's response to changing relative prices or real income is distributed over time. In the short run, the consumer's response is constrained by his inability to change his stock of gasoline capital, i.e., purchase an auto that gets better gasoline mileage. However, his long-run response will include a change in the stock of gasoline-using capital. The standard way of specifying a model of this type is shown as:

$$\ln Q_t^D = \ln B_0 + B_1 \ln (PG_t/P_t^C) + B_2 \ln INC_t +$$

$$B_3 SHRTGE_t + B_4 \ln Q_{t-1}^D + U_t$$

where:

$\ln Q_t^D$, $\ln Q_{t-1}^D$ = natural log of domestic gasoline product demand in millions of barrels per capita in year t and t-1 (Source: Bureau of Mines and Bureau of the Census),

$\ln(PG_t/P_t^C)$ = natural log of the price index of gasoline including taxes as ratio to the personal consumption deflator

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in year t (Source: Bureau of Labor Statistics and Bureau of Economic Analysis),

$\ln INC_t$ = natural log of real per capita disposable personal income in year t (Source: Bureau of Economic Analysis).

$SHRTGE_t$ = a dummy variable for price controls induced shortages in 1974 and 1979 (1974 and 1979 = 1, otherwise 0)

U_t = random error term.

This equation was estimated using annual data for the 1948-1979 period using ordinary least squares. The results of this equation are presented below. Econometrically the equation possesses the desirable characteristics with a high R^2, correct signs and statistically significant coefficients for the explanatory variables, and no evidence of serial correlation or heteroscedasticity.

Equation:

$$\ln Q_t^D = \underset{-2.30}{\ln B_0} + \underset{-0.10}{B_1 \ln(PG_t/P_t^C)} + \underset{0.21}{B_2 \ln INC_t} +$$
$$\underset{(4.70)^{**}}{} \qquad \underset{(-2.18)^{*}}{} \qquad \underset{(4.44)^{**}}{}$$

$$\underset{-0.04}{B_3 SHRTGE} + \underset{0.76}{B_4 \ln Q_{t-1}^D}$$
$$\underset{(-2.67)^{*}}{} \qquad \underset{(16.17)^{**}}{}$$

$\bar{R}^2 = 0.9951$ F (3.27) = 1368.15
S.E. = 0.1529 h = 0.019
n = 32 (1948-1979)

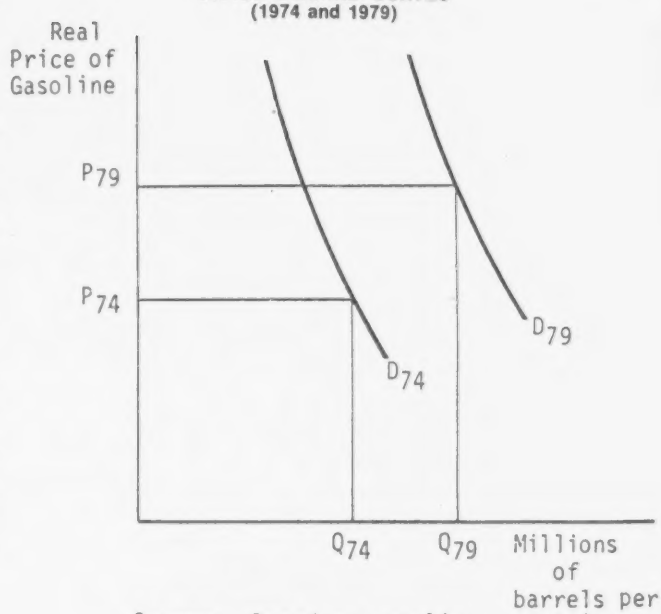
*t value significant at 2.5 percent level using one tailed test.

**t value significant at 0.5 percent level using one tailed test.

CHARACTERISTICS OF THE GASOLINE DEMAND CURVE

Using the results of the gasoline demand equation estimated in the previous section, demand curves were plotted for 1974 and 1979 real income levels. These demand curves are shown in Figure 3. Note that the real prices of gasoline are indicated on the vertical axis and the predicted quantities consumed are indicated for each demand curve on the horizontal axis. As our demand curves illustrate the basic reason that consumption is higher in 1979 than 1974 even with higher real prices is due to the increases in demand due to rising real incomes. Overall, the demand curve is as economic theory would postulate in that for each real income level real prices and consumption are inversely related.

FIGURE 3
FITTED DEMAND CURVES
(1974 and 1979)



Source: Based on gasoline demand fitted equation

The responsiveness of consumption to real price and real income changes can be measured using a concept known as elasticity. The price elasticity of demand measures the responsiveness of the quantity demanded to the change in real prices, while the income elasticity of demand measures the responsiveness of the quantity demanded to a change in real income. Based on the estimated demand equation the short-run price elasticity of demand for gasoline is -0.10.[5] This means that a 10% increase in the real price of gasoline will reduce gasoline consumption by 1%. The short-run demand for gasoline is very inelastic reflecting the fact that in the short run most consumers are unable to alter their driving habits to any great extent. They may adjust to some extent by reducing unnecessary trips, driving slower, walking or riding a bicycle more, or forming car pools. Over the long run, however, they may make greater adjustments such as driving smaller cars, not living so far from work, etc. Based on the estimated equation the long-run price elasticity of demand estimate is -0.42 or about four times greater than the short-run impact. This means in the long run a 10% increase in real price of gasoline will decrease consumption by 4.2%. The short-run income elasticity of demand is 0.21 and the long-run estimate is 0.88. This indicates that gasoline consumption is considerably more responsive to real income changes than to real price changes.

The short-run price elasticity estimate of -0.10 is very low and indicates a small consumption response to changes in gasoline prices. However, the estimate is not implausible and it compares well with other studies on the demand for gasoline. Table 1 presents estimates derived from other comparable studies.

TABLE 1
Summary of Price and Income Elasticity Estimates for Gasoline Demand

Model	Price Elasticity		Income Elasticity	
	Short	Long	Short	Long
Sweeney	-0.12	-0.72	0.85	0.78
Lady	-0.16		0.48	
Verleger	-0.16	-0.54	0.32	1.06
Mc Gillivray	-0.22	-0.69		
Windhorn et al	-0.14	-0.93		
Houthakker et al	-0.08	-0.24	0.30	0.98
Phillips	-0.12	-0.68		

Sources:

1. J. Sweeney, *Passenger Car Use of Gasoline: An Analysis of Policy Operations* (Washington, D.C.: Federal Energy Administration, 1975).
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7. L. Philips "A Dynamic Version of the Linear Expenditure Model," *Review of Economics and Statistics*, 54, No. 4 (1972).

APPLICATIONS OF THE MODEL

Using the numerical results derived from our demand equation we can derive the market-clearing price for any given supply reduction. The reader is reminded that this price is the equilibrium price that would result in the absence of gasoline price controls. Without going into the algebraic derivation, the equilibrium 1980 regular price of leaded gasoline in nominal terms is:

$$PG_{80} = 1 + \frac{-(qs + Ey.\ inc)}{Ep - Eps} + P_{80} \cdot PG_{79}$$

where

PG_{79}, PG_{80} = price of regular leaded gasoline in 1979 and 1980,

qs = percentage change in gasoline supplies from 1979 to 1980,

Ey = short-run income elasticity of demand,

Ep = short-run price elasticity of demand,

Eps = short-run price elasticity of supply,

inc = percentage change in real per capita disposable personal income from 1979 to 1980,

P_{80} = percentage change in personal consumption deflator from 1979 to 1980.

Using the formula presented above we can compute the market-clearing prices for alternative supply reduction percentages.[6] Based on a current average price for leaded regular gasoline of $1.15 per gallon, the market-clearing price at different levels of supply reductions are presented in Table 2.

TABLE 2
Equilibrium Price of Gasoline for Different Supply Reductions[a]

Reduction in Supply From Current Levels	Price of Leaded Regular Gasoline to Equate Supply and Demand
2%	$1.38
6	1.84
10	2.30
15	2.80
20	4.45

[a]Based on mid-February price of $1.15 as reported in the *Oil and Gas Journal*.

Several caveats are in order. This is a short-run analysis and the longer the time period the higher the price elasticity of demand. The higher the price elasticity of demand the lower the price change necessary to equilibriate supply and demand. The short-run price elasticity of demand estimate provided in this study indicates a very inelastic demand for gasoline.[7] If the true value is actually somewhat higher the equilibrium price would be less. For instance, for a 10% supply reduction if the price elasticity of demand is -0.15 or -0.20 the equilibrium price would be $1.92 and $1.73 per gallon respectively. Our analysis assummed that the short-run price elasticity of supply is zero. If this is too low, our estimate of the market-clearing price is overstated. Finally, our analysis is based on data for the U.S. as a whole. Actually shortages tend to be most severe in fast growth states which have experienced more rapid population growth and their gasoline allocations by the Federal energy officials do not keep pace with demand. It is interesting to note that under a system of market allocation the price would rise in shortage states which would attract gasoline to that state to alleviate the shortage.

RATIONING VS. THE MARKET

There are basically two ways to deal with a shortage. One is to allow the price to rise to the level where the quantity demanded and supplied at that price are equal. The second approach is to maintain the controlled price,[8] but devise a program for rationing the limited supplies. Both approaches have their advantages and disadvantages which will be discussed in turn.

As recent developments in Washington suggest the subject of gasoline rationing is certainly a controversial topic. Those who argue for mandatory gasoline rationing usually argue that rationing by price is an unfair burden on the poor and rapidly rising energy prices are inflationary. Since they are unwilling to allow prices to rise to the market-clearing level they must determine some method of distributing the available supplies. One form of rationing is "first come, first served" and often involves long lines and short tempers.[9] Because of widespread dissatisfaction with this form of rationing, rationing by government fiat is

often proposed. Under government controlled rationing plans coupons are printed which entitles the bearer to purchase a stated quantity of gasoline at the controlled price. The obvious problem is: Who gets the coupons? Usual approaches involve the distribution of coupons on the basis of the number of autos or on the basis of historical state allocations of gasoline. Decisions of this type involve complex political as well as economic problems. For instance, states like Colorado, where there is limited public transportation and people must drive relatively longer distances, would probably be harmed by a rationing system. Additionally, the problem of special cases such as salespeople, farmers, and ranchers who depend on the auto raises difficult questions.

One way of alleviating the distribution of coupon problems is to allow a "white market" for coupons. That is, a market for the coupons would develop so that those people who had more coupons than they needed could voluntarily sell them to other people who are in need of additional coupons.

Critics of rationing argue that it is not possible to design an equitable rationing plan and there is no reason to believe that the poor will be better off under a rationing program than without. They feel the argument that rationing protects the consumer from high prices is a myth. Under this system the price of gasoline effectively becomes the controlled price plus the coupon price since coupons can be sold for cash. However, rationing does hold down prices for the producer and as a result does not give the incentives for greater production that market-determined prices would. They also argue that a rationing program is expensive because it takes thousands of bureaucrats to administer.

Advocates of using the market price as a rationing device take a different approach than the rationing advocates. They tend to argue that market prices convey information and incentives to both consumers and producers. Higher prices signal that the good is scarce and gives consumers incentives to economize on the consumption of that good. Those consumers whose particular use of gasoline is not as highly valued as the price will find themselves rationed out of the market. They will adjust their behavior by using alternative modes of transportation, taking fewer trips, planning shorter distance vacations, buying smaller autos, and by altering their driving habits. Thus the market price provides incentives to economize. Producers, on the other hand, see increased profits in the high price and expand output over time. Supporters of the market argue that in the long run, gasoline consumption is more than just a matter of lifestyle and income and that prices do matter. Efforts to hold prices below their scarcity value only leads to distortions in the allocation of energy resources.

The usual criticism of using the market to allocate resources is that it is unfair. That is if we allow gasoline prices to rise to the market-clearing price we place an undue burden on the poor. Also, they see high market prices as leading to high oil company profits. Therefore, while the market system often is the most efficient device for the allocation of resources it may not always be seen as the most equitable device. One approach supported by many economists is to allow the market to perform its magic and deal with the problem of equity through the welfare programs rather than attempting to make a welfare program out of the energy program.

[1]Senator Edward M. Kennedy, a democratic Presidential hopeful, called for immediate gasoline rationing in his Georgetown University speech on January 28, 1980, and the Administration's program was expected to be announced in March.

[2]As reported in the Wall St. Journal, February 11, 1980, p. 3.

[3]Readers unfamiliar with econometric modeling techniques may proceed to the next section without loss of continuity.

[4]H. S. Houthakker and L. D. Taylor, *Consumer Demand in the United States 1929-1970*, (Cambridge, Mass.: Harvard University Press, 1970).

[5]Several alternative specifications and time periods were estimated. Because the 1974 and 1979 shortage dummy is a rather crude estimate of the shortage impacts a regression was estimated over the same period without the shortage dummy. The price elasticity estimate was −0.18 for this specification. However, this estimate is undoubtedly biased high due to failure to take into account the shortages that occurred in 1974 and 1979. Estimates for 1948-1978 with the SHRTGE dummy for 1974 provided price elasticity estimates of −0.07. Estimates excluding the years 1974 and 1979 provided price elasticity estimates of −0.10. In all it seems that price elasticity estimates of −0.07 to −0.10 are reasonable.

[6]The basic model used for these calculations assumed the market is currently in equilibrium at a price of $1.15 per gallon and no growth in income or personal consumption deflator from present levels. If calculations are to be made for 1981 or future years the shift in the demand curve due to income changes and change in the real price of gasoline from changes in the personal consumption deflator would have to be taken into account.

[7]The model used in estimating the elasticity coefficients presented herein assumed constant elasticity throughout the whole range of the demand curve. However, it is possible that the demand curve becomes more elastic at very high prices.

[8]Gasoline prices have been under federal price controls since 1971. However, it is generally agreed that the controls have not been effective, except for short periods in 1974 and 1979 when the controls program did effectively hold prices below the market-clearing prices. In both cases shortages resulted.

[9]Other devices for nonprice rationing included 55 miles per hour speed limits, odd-even day sales of gasoline, no tank-topping rules, weekend closings, mandatory gasoline consumption limits on new autos, and one-day-a-week prohibitions on driving.

COLORADO BUSINESS INDICATORS

(Figures in Thousands Unless Otherwise Indicated)

	November 1979	October 1979	November 1978	Percent Change November 1979 from October 1979	Percent Change November 1979 from November 1978
Total Civilian Labor Force (by place of residence)[a]	1,389.7	1,405.5	1,353.4	- 0.6	2.7
Unemployment	42.5	42.9	46.7	- 0.9	- 9.0
Unemployment Rate (percent)	3.1	3.1	3.4	—	—
Employment	1,347.2	1,362.6	1,306.7	- 1.1	3.1
Nonagricultural Wage and Salary	1,209.9	1,209.8	1,170.5	0.0	3.4
Agricultural	32.3	46.3	32.8	-30.2	- 1.5
Self-employed, unpaid family and domestics	105.0	106.5	103.4	- 1.4	1.6
Total Nonagricultural Wage and Salary Employment (by place of work)[a]	1,206.5	1,207.8	1,168.0	- 0.1	3.3
Mining	31.9	31.7	28.4	0.6	12.3
Metallic Minerals	10.8	10.6	9.8	1.9	10.2
Bituminous Coal, Lignite and Nonmetallic	5.3	5.4	4.6	- 1.9	15.2
Oil and Gas Extraction	15.8	15.7	14.0	0.6	12.9
Contract Construction	81.4	84.0	76.3	- 3.1	6.7
Manufacturing	180.7	182.7	172.8	- 1.1	4.6
Lumber, Wood Products and Furniture	7.6	7.9	7.5	- 3.8	1.3
Stone, Clay, Glass and Concrete Products	10.7	10.8	10.4	- 0.9	2.9
Primary and Fabricated Products	21.2	21.0	20.5	1.0	3.4
Machinery, Except Electrical	25.2	25.1	22.7	0.4	11.0
Electric and Electronic Equipment	13.8	13.5	12.3	2.2	12.2
Transportation Equipment	11.2	11.0	10.9	1.8	2.8
Other Durable Goods	23.4	23.5	22.2	- 0.4	5.4
Food and Kindred Products	26.3	28.7	27.0	- 8.4	- 2.6
Textiles and Apparel	4.8	4.8	4.6	0.0	4.4
Paper and Allied Products	1.8	1.8	1.7	0.0	5.9
Printing and Publishing	15.9	15.8	15.0	0.6	6.0
Chemicals and Allied Products	6.5	6.4	6.2	1.6	4.8
Other Nondurable Goods	12.2	12.3	11.9	- 0.8	2.5
Finance, Insurance and Real Estate	72.9	27.7	69.1	0.3	5.5
Banking	17.4	17.3	16.4	0.6	6.1
Credit Agencies and Other Banks	11.7	11.6	10.8	0.9	8.3
Insurance Carriers, Agents and Brokers	20.2	20.1	18.9	0.5	6.9
Real Estate and Combination Offices	19.9	19.9	19.3	0.0	3.1
Other Finance, Insurance and Real Estate	3.8	3.7	3.6	2.7	5.6
Transportation and Public Utilities	75.6	75.4	71.1	0.3	6.3
Railroad Transportation	7.5	7.4	7.2	1.4	4.2
Trucking and Warehousing	17.3	17.4	16.5	- 0.6	4.9
Air Transportation	12.0	12.1	11.1	- 0.8	8.1
Other Transportation	4.4	4.4	4.1	0.0	7.3
Communications, Electric, Gas and Sanitary Services	34.3	34.1	32.2	0.6	6.5
Trade	295.6	294.3	291.2	0.4	1.5
Wholesale Trade	69.4	69.4	66.8	0.0	3.9
Retail Trade	226.2	224.9	224.4	0.6	0.8
Services	243.1	242.2	237.5	0.4	2.4
Lodging and Combination Lodging/Eating Places	20.6	20.9	20.4	- 1.4	1.0
Personal Services	12.8	12.7	12.4	0.8	3.2
Business Services	43.7	43.8	42.5	- 0.2	2.8
Auto and Miscellaneous Repair Services	14.1	14.2	13.0	- 0.7	8.5
Amusements and Recreation	13.4	13.0	16.2	3.1	-17.3
Health Services	63.0	62.6	60.4	0.6	4.3
Educational Services	10.8	10.5	11.1	2.9	- 2.7
Membership Organizations	21.0	20.9	21.1	0.5	- 0.5
Other Services	43.7	43.7	40.5	0.0	7.9
Government	225.2	224.6	221.5	0.3	1.7
Federal	49.7	49.7	50.0	0.0	- 0.6
State	60.1	60.4	56.2	- 0.5	6.9
Local	115.4	114.6	115.2	0.7	0.2

	November 1979	October 1979	November 1978	Percent Change November 1979 from October 1979	Percent Change November 1979 from November 1978
Average Weekly Hours					
Construction	37.8	38.0	36.0	- 0.5	5.0
Manufacturing	39.5	39.4	39.3	0.3	0.5
Nondurable Goods	38.7	38.5	39.5	0.5	- 2.0
Durable Goods	40.0	40.1	39.1	- 0.2	2.3
Average Weekly Earnings ($)					
Construction	383.29	383.42	331.20	- 0.0	15.7
Manufacturing	274.52	271.47	249.95	1.1	9.8
Nondurable Goods	264.32	260.64	252.01	1.4	4.9
Durable Goods	280.80	279.50	248.28	0.5	13.1
Initial Unemployment Claims (000)	14.0	10.9	12.4	28.4	12.9
Bankruptcies, All Types (number)	314	318	345	- 1.3	- 9.0
Total State Revenue ($000)	285,195	244,717	276,192	16.5	3.3
Total State Expenditures ($000)	253,054	237,877	230,835	6.4	9.6
Crude Oil Production (thous. bbls.)	2,609	2,687r	2,949r	- 2.9	-11.5
Dry Gas Production (mil. cu. ft.)	13,607	11,103r	11,540r	22.6	17.9
Coal Production (thous. tons)	1,405.4	1,701.6	1,391.8	-17.4	1.0
New Oil and Gas Wells (number)	122	163	80	-25.2	52.5
Natural Gas Used (bil. cu. ft.)	28.0	18.9	25.6	48.2	9.4
Electrical Power Sales (mil. kwh)					
Residential	455.0	395.5r	411.9	15.0	10.5
Nonresidential	944.7	960.4r	881.6	- 1.6	7.2
New Construction, 52 cities					
Residential permits (number)	825	1,633r	1,347r	-49.5	-38.8
Residential value ($000)	41,267	71,157r	56,925r	-42.0	-27.5
Nonresidential permits (number)	155	215	135r	-27.9	14.8
Nonresidential value ($000)	27,422	32,660	27,255r	-16.0	0.6
Highway Contractor Payments ($000)	14,298	21,772	16,713	-34.3	-14.4
Ordinary Life Insurance Sales ($000)	448,683	481,107	393,371	- 6.7	14.1
Bank Deposits, 119 cities, 239 of 299 banks					
Demand ($000,000)	4,618	4,691	4,255	- 1.6	8.5
Time and Savings ($000,000)	6,273	6,268	5,745	0.1	9.2
Savings and Loan Net New Savings ($000)	40,897	27,434	37,454	49.1	9.2
National Park Visits (000)[b]	143.1	406.1r	185.3	-64.8	-22.8
Motor Vehicle Title Applications (000)	91.6	85.9	73.7	6.6	24.3
Highway Vehicle Traffic Counts at Border Stations (daily average)	27,372	33,143	31,487	-17.4	-13.1
Air Passengers, Stapleton (000)[c]	1,521	1,631	1,465	- 6.7	3.8
Air Freight and Air Express, Stapleton (thous. lbs.)	21,963	21,179	22,252	3.7	- 1.3
Prices Received by Farmers ($)					
Beef Cattle (per cwt)	66.30	69.00	52.70	- 3.9	25.8
Lambs (per cwt)	62.30	66.30	58.90	- 6.0	5.8
Wheat (per bu.)	3.61	3.56	2.80	1.4	28.9
Corn (per bu.)	2.44	2.44	2.13	0.0	14.6
Potatoes (per cwt)	3.20	2.64	2.16	21.2	48.2
Wool (per lb.)	.86	.85	.75	1.2	14.7

NOTES: An asterisk (*) indicates preliminary data subject to revision.
Revised data are marked (r).
n.r.—not reported

[a]Employment figures have been updated to a September 1977 benchmark and are arranged by 1972 Standard Industrial Classifications (SICs). Previously reported data were on a March 1974 benchmark utilizing 1967 SICs. Thus, these data are not comparable to that published prior.

[b]Shadow Mountain National Recreation Area's visits are not included in these figures as this area is now administered by the U.S. Forest Service.

[c]Includes scheduled airlines, commuter airlines and charter passengers.

Employment, Hours, and Earnings data from Colorado Department of Labor and Employment.

Bankruptcies from the Office of the Federal Referee in Bankruptcy.

State Revenue and Expenditures from the State Controller's Office.

Crude Oil Production, Dry Gas Production and New Oil and Gas Wells from the Oil and Gas Conservation Commission.

Coal Production from Colorado State Coal Mine Inspection Department.

Natural Gas Used from Colorado Interstate Gas Company.

Electrical Power Sales from individual companies.

New Construction from individual cities.

Highway Contractor Payments from the Colorado Highway Department.

Life Insurance Sales from the Life Insurance Agency Management Sales Report.

Bank Deposits from individual banks.

Savings and Loan Net New Savings from Federal Home Loan Bank of Topeka.

National Park Visits from individual areas.

Highway Traffic counts from Colorado Highway Department.

Air Passengers, Freight, and Express from Stapleton International Airport Business Office.

Prices Received by Farmers from U.S. Department of Agriculture.

LOCAL BUSINESS CONDITIONS

(All Figures in Thousands)

	November 1979	October 1979	November 1978
ALAMOSA (1978 pop. 8,000)			
Electric Power (kwh) ...	2,977	2,894	2,985
Deposits ($)—Demand .	21,375	23,064	19,953
(2 of 2 banks)—T&S ..	18,212	19,624	16,715
Constr. ($)—Res.	0	30	93
—Nonres. ...	0	50	7
ARVADA (1979 pop. 85,300)			
Electric Power (kwh) ...	25,701	25,055	22,875
Deposits ($)—Demand .	40,535	36,815	34,152
(3 of 4 banks)—T&S ..	34,998	35,440	35,475
Constr. ($)—Res.	636	976	1,819
—Nonres. ...	371	215	345
ASPEN (1978 pop. 7,500)			
Electric Power (kwh) ...	4,431	3,399	3,572
Deposits ($)—Demand .	14,106	16,159	14,634
(1 of 2 banks)—T&S ..	22,911	23,925	22,801
Constr. ($)—Res.	0	550	100
—Nonres. ...	0	0	0
AURORA (1979 pop. 151,900)			
Electric Power (kwh) ...	64,988	63,303	56,650
Deposits ($)—Demand .	41,268	41,701	37,265
(4 of 9 banks)—T&S ..	56,820	59,578	51,936
Constr. ($)—Res.	5,382	16,871	10,482
—Nonres. ...	940	4,417	485
BOULDER (1979 pop. 90,900)			
Electric Power (kwh) ...	50,447	45,743	44,263
Deposits ($)—Demand .	144,586*	151,199*	130,717
(8 of 8 banks)—T&S ..	228,748*	241,327*	223,189
Constr. ($)—Res.	263	1,446	1,844
—Nonres. ...	900	400	1,757
BRIGHTON (1979 pop. 12,000)			
Electric Power (kwh) ...	3,859	3,977	4,005
Deposits ($)—Demand .	19,629	19,867	18,099
(2 of 2 banks)—T&S ..	28,532	25,288	25,610
Constr. ($)—Res.	1,904	235	337
—Nonres. ...	181	0	0
BROOMFIELD (1979 pop. 23,200)			
Electric Power (kwh) ...	7,926	8,524	7,633
Deposits ($)—Demand .	15,182	15,584	14,402
(2 of 2 banks)—T&S ..	23,118	23,003	20,518
Constr. ($)—Res.	540	2,551	777
—Nonres. ...	0	0	0
BRUSH (1978 pop. 4,200)[a]			
Electric Power (kwh) ...	1,939	1,837	1,801
Deposits ($)—Demand .	12,348	12,950	11,010
(2 of 2 banks)—T&S ..	33,225	33,039	25,332
CANON CITY (1978 pop. 14,215)			
Electric Power (kwh) ...	24,013	22,069	22,567
Deposits ($)—Demand .	20,998	21,299	20,353
(3 of 3 banks)—T&S ..	52,028	52,353	46,238
Constr. ($)—Res.	103	269	311
—Nonres. ...	20	140	0
COLORADO SPRINGS (1978 pop. 201,700)			
Electric Power (kwh) ...	148,947	145,821	138,313
Deposits ($)—Demand .	292,305	286,911	265,657
(13 of 17 banks)—T&S	448,424	459,366	430,281
Constr. ($)—Res.[b]	4,975	10,471	7,165
—Nonres. ...	3,250	11,336	2,603
COMMERCE CITY (1979 pop. 16,000)			
Electric Power (kwh) ...	24,734	19,261	15,454
Deposits ($)—Demand .	9,089	9,840	8,748
(1 of 1 bank)—T&S ...	14,088	10,151	9,636
Constr. ($)—Res.	264	46	182
—Nonres. ...	197	501	145
CORTEZ (1978 pop. 8,200)			
Electric Power (kwh) ...	3,400	2,555	3,049
Deposits ($)—Demand .	15,541	16,706	15,799
(2 of 2 banks)—T&S ..	31,489	31,545	29,101
Constr. ($)—Res.	142	223	552
—Nonres. ...	40	405	0
CRAIG (1977 pop. 6,677)			
Electric Power (kwh) ...	4,635	4,146	4,007
Deposits ($)—Demand .	22,504	21,883	17,996
(2 of 2 banks)—T&S ..	33,583	34,236	26,532
Constr. ($)—Res.	309	933	241
—Nonres. ...	17	145	19
DENVER (1979 pop. 527,800)			
Electric Power (kwh) ...	299,560	307,406	292,026
Deposits ($)—Demand .	2,317,237	2,363,045	2,140,881
(29 of 34 banks)—T&S	2,548,135	2,498,119	2,376,251
Constr. ($)—Res.	5,005	6,416	10,236
—Nonres. ...	6,264	6,373	7,391
DURANGO (1978 pop. 14,100)			
Electric Power (kwh) ...	6,370	5,970	6,296
Deposits ($)—Demand .	36,683	35,830	33,453
(3 of 3 banks)—T&S ..	53,593	56,908	50,939
Constr. ($)—Res.	134	0	0
—Nonres. ...	199	1,030	21
ENGLEWOOD (1979 pop. 33,000)			
Electric Power (kwh) ...	18,408	19,356	17,922
Deposits ($)—Demand .	117,358	117,490	104,125
(5 of 5 banks)—T&S ..	151,557	153,183	142,209
Constr. ($)—Res.	52	116	63
—Nonres. ...	82	473	148
ESTES PARK (1976 pop. 2,127)			
Electric Power (kwh) ...	4,176	3,659	4,033
Deposits ($)—Demand .	8,722	10,268	8,314
(2 of 2 banks)—T&S ..	19,183	19,255	17,273
Constr. ($)—Res.	1,249	24	149
—Nonres. ...	0	0	0
FORT COLLINS (1977 pop. 67,100)			
Electric Power (kwh) ...	28,333	26,643	29,591
Deposits ($)—Demand .	114,981	118,535	102,407
(6 of 6 banks)—T&S ..	196,781	199,828	180,360
Constr. ($)—Res.	5,748	6,213	3,019
—Nonres. ...	2,450	313	625
FORT MORGAN (1976 pop. 8,582)			
Electric Power (kwh) ...	6,698	4,550	n.r.
Deposits ($)—Demand .	21,929	20,706	19,859
(2 of 2 banks)—T&S ..	50,122	49,535	46,298
Constr. ($)—Res.	30	236	n.r.
—Nonres. ...	0	0	n.r.
GLENWOOD SPRINGS (1977 pop. 4,091)			
Electric Power (kwh) ...	4,605	3,636	3,509
Deposits ($)—Demand .	29,143	30,008	25,985
(2 of 2 banks)—T&S ..	54,971	55,741	47,233
Constr. ($)—Res.	n.r.	n.r.	996
—Nonres. ...	n.r.	n.r.	0
GOLDEN (1979 pop. 14,900)			
Electric Power (kwh) ...	5,647	5,315	5,309
Deposits ($)—Demand .	35,642	34,898	33,112
(2 of 2 banks)—T&S ..	62,381	62,009	52,321
Constr. ($)—Res.	195	1,016	126
—Nonres. ...	0	0	0
GRAND JUNCTION (1977 pop. 30,245)			
Electric Power (kwh) ...	15,916	15,870	15,757
Deposits ($)—Demand .	108,289	105,621	97,295
(5 of 5 banks)—T&S ..	154,747	152,237	121,837
Constr. ($)—Res.	1,703	735	686
—Nonres. ...	313	49	254
GREELEY (1977 pop. 58,900)			
Electric Power (kwh) ...	22,724	22,259	13,219
Deposits ($)—Demand .	98,523	94,997	96,031
(7 of 7 banks)—T&S ..	253,203	249,578	220,680
Constr. ($)—Res.	551	1,913	2,699
—Nonres. ...	567	158	3,742
GUNNISON (1978 pop. 6,000)			
Electric Power (kwh) ...	1,552	3,355	3,449
Deposits ($)—Demand .	14,168	16,639	13,331
(2 of 2 banks)—T&S ..	22,163	21,966	18,563
Constr. ($)—Res.	22	750	0
—Nonres. ...	0	0	0
LA JUNTA (1976 pop. 8,700)			
Electric Power (kwh) ...	4,555	4,347	4,192
Deposits ($)—Demand .	18,539	18,633	16,464
(1 of 2 banks)—T&S ..	18,323	17,831	16,262
Constr. ($)—Res.	0	0	94
—Nonres. ...	2,761	30	0

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LOCAL BUSINESS CONDITIONS—Continued

	November 1979	October 1979	November 1978
LAKEWOOD (1979 pop. 134,400)			
Electric Power (kwh) ...	47,916	50,155	46,595
Deposits ($)—Demand .	140,873	170,550	131,816
(7 of 8 banks)—T&S ..	214,164	218,631	213,343
Constr. ($)—Res.	3,319	1,325	3,468
—Nonres. ...	837	4,133	523
LAMAR (1976 pop. 8,500)			
Electric Power (kwh) ...	4,950	5,345	4,850
Deposits ($)—Demand .	17,611	14,762	16,018
(2 of 2 banks)—T&S ..	27,325	27,153	20,639
Constr. ($)—Res.	35	754	109
—Nonres. ...	0	0	322
LITTLETON (1979 pop. 34,100)			
Electric Power (kwh) ...	16,420	16,038	15,596
Deposits ($)—Demand .	53,003	54,953	51,222
(3 of 3 banks)—T&S ..	88,454	93,560	87,005
Constr. ($)—Res.	1,044	648	570
—Nonres. ...	753	126	0
LONGMONT (1979 pop. 45,200)			
Electric Power (kwh) ...	23,149	18,025	21,842
Deposits ($)—Demand .	54,490	53,225	50,826
(4 of 5 banks)—T&S ..	88,061	91,253	84,265
Constr. ($)—Res.	1,534	3,099	1,976
—Nonres. ...	40	605	984
LOVELAND (1978 pop. 31,986)			
Electric Power (kwh) ...	17,680	14,100	17,146
Deposits ($)—Demand .	43,363	42,185	39,328
(4 of 4 banks)—T&S ..	73,797	75,585	66,250
Constr. ($)—Res.	1,016	4,075	2,040
—Nonres. ...	156	542	2,403
MANITOU SPRINGS (1978 pop. 4,900)[c]			
Electric Power (kwh) ...	1,327	1,163	1,274
Deposits ($)—Demand .	3,594	3,670	3,589
(1 of 1 bank)—T&S ...	6,459	6,565	6,122
MONTROSE (1976 pop. 8,500)[d]			
Deposits ($)—Demand .	28,335	30,317	25,736
(2 of 3 banks)—T&S ..	42,602	43,271	37,708
Constr. ($)—Res.	267	307	38
—Nonres. ...	153	0	0
NORTHGLENN (1979 pop. 33,000)			
Electric Power (kwh) ...	9,992	9,955	9,749
Deposits ($)—Demand .	23,226	23,163	20,057
(2 of 2 banks)—T&S ..	29,746	30,843	25,148
Constr. ($)—Res.	89	0	0
—Nonres. ...	4,700	0	28
PUEBLO (1976 pop. 105,000)			
Electric Power (kwh) ...	48,058	49,535	46,968
Deposits ($)—Demand .	115,474	120,939	116,813
(7 of 8 banks)—T&S ..	182,587	182,928	167,782
Constr. ($)—Res.	833	1,179	1,689
—Nonres. ...	259	328	2,815
ROCKY FORD (1976 pop. 5,250)			
Electric Power (kwh) ...	4,991	5,301	4,753
Deposits ($)—Demand .	8,281	8,693	8,703
(2 of 2 banks)—T&S ..	7,609	7,615	7,003
Constr. ($)—Res.	0	0	n.r.
—Nonres. ...	0	0	n.r.
SALIDA (1978 pop. 5,354)			
Electric Power (kwh)	1,576	1,319	1,508
Deposits ($)—Demand	10,103	11,137	10,092
(2 of 2 banks)—T&S	20,757	20,942	17,378
Constr. ($)—Res.	38	177	162
—Nonres.	0	0	0
STERLING (1978 pop. 11,500)			
Electric Power (kwh)	5,676	6,070	5,515
Deposits ($)—Demand	44,453	32,751	33,115
(3 of 3 banks)—T&S	79,587	75,461	64,083
Constr. ($)—Res.	74	159	50
—Nonres.	0	0	0
THORNTON (1979 pop. 37,000)			
Electric Power (kwh)	13,686	13,698	12,683
Deposits ($)—Demand	21,587	11,881	11,117
(1 of 1 bank)—T&S	8,235	8,322	9,088
Constr. ($)—Res.	409	2,429	1,622
—Nonres.	1,232	404	247
TRINIDAD (1976 pop. 10,000)			
Electric Power (kwh)	2,960	2,737	2,819
Deposits ($)—Demand	15,515	16,222	15,556
(2 of 2 banks)—T&S	25,452	25,238	21,930
Constr. ($)—Res.	0	83	221
—Nonres.	0	0	0
WALSENBURG (1976 pop. 4,600)			
Electric Power (kwh)	1,286	1,065	1,260
Deposits ($)—Demand	5,554	5,461	5,729
(1 of 1 bank)—T&S	12,597	12,839	11,251
Constr. ($)—Res.	0	0	30
—Nonres.	0	0	0
WESTMINSTER (1979 pop. 54,300)			
Electric Power (kwh)	16,572	20,494	14,550
Deposits ($)—Demand	29,865	32,511	29,613
(2 of 2 banks)—T&S	37,105	36,626	33,871
Constr. ($)—Res.	2,891	3,942	2,464
—Nonres.	303	46	58
WHEAT RIDGE (1979 pop. 38,000)			
Electric Power (kwh)	21,715	21,309	15,405
Deposits ($)—Demand	22,716	21,486	18,665
(2 of 2 banks)—T&S	31,098	30,723	28,982
Constr. ($)—Res.	87	23	0
—Nonres.	435	298	162

[a]Construction figures are not available.

[b]Regional figures.

[c]Included in Colorado Springs regional construction figures.

[d]Electric Power consumption figures are not available.

NOTES: Population figures are estimates from regional council of governments, and individual cities.
T&S—Time and Savings Deposits
Construction figures are valuation of new residential and nonresidential construction only.
n.r.—not reported
*—preliminary data
r—revised data

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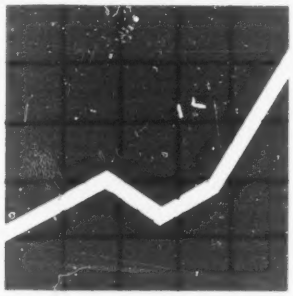

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BUSINESS RESEARCH DIVISION • GRADUATE SCHOOL OF BUSINESS ADMINISTRATION • UNIVERSITY OF COLORADO

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A Remembered Glory

ROBERT MUSGJERD

I find it ironic that America, in its maturity, is being forced to rediscover what it knew in its infancy —the importance of foreign trade. Our redoubtable Yankee Trader forebears would be bemused if they were miraculously returned to earth to sit in on recent hearings before the Joint Economic Committee of the Congress. I suspect they would scratch their heads in bewilderment at a congressional investigation into why United States business and industry was being so consistently thrashed in the international trading arena.

When the world and America were younger, it was the Yankee Trader who was feared by other merchants—and for good reason. The American Colonies were founded because of trade, and this nation's early strength was trade. We fought a war with England to protect our trading rights, and national elections were won and lost because of the candidates' views on trade.

But in the course of our development as a nation, foreign commerce took a steadily diminishing role. We became preoccupied with spanning our continent with railroads, developing our fabulous mineral resources, and expanding our manufacturing industries to meet the growing demands of a steadily increasing population. Foreign trade, as a percentage of gross national products, declined. It is still a relatively insignificant percentage of our total economic activity. With GNP approaching $2 trillion, total U.S. exports are considerably less than $200 billion—less than 10%.

THE EFFECTS OF WORLD WAR II

America was not especially interested in international trade competition prior to World War II and did not have to worry about competition immediately thereafter. We had virtually the only intact industrial plant in the world, and our market consisted of the pent-up demand of our own nation as well as the rest of the world. Whatever we could produce, we could sell.

The world today is a vastly different place. Japan and West Germany—our major trading competitors—rebuilt their industrial plants from the ground up after World War II. Both are more modern than ours and more efficient. Wages in these two countries were lower during the years of rebuilding, and both countries were hungry for foreign trade. They were keenly aware that they had to trade to survive. This was especially true of Japan, a nation with few mineral resources. By the 1950s, German Volkswagens, cameras, and radios had begun to penetrate the U.S. market. Japanese goods followed soon after—first transistor radios, then stereo equipment, televisions, and cameras.

These two countries have beaten our socks off economically. This has not happened because they built things better than we do, or because they are better salesmen, or because their research is better. It has happened because Japan and Germany have one immense advantage: they have governments which encourage their export industries. The governments of both nations know they must compete successfully in international markets, and they have developed constructive and far-ranging trade policies.

THE NEED FOR A TRADE POLICY

Washington has seen the huge trade surpluses tallied by the West Germans and Japanese and told American businessmen to "go and do likewise"—but that in itself is not a trade policy. It's a long way from a trade policy.

What passes for national economic policy is still a strongly entrenched determination to transfer wealth from the productive sector of the economy to the unproductive sector—to reward spending and penalize saving, to encourage consumption and discourage investment.

The relentless piling up of a national budget deficit of $30 to $60 million a year means that the government's printing presses must constantly be operating to finance the federal deficit, creating more and more dollars of less and less value. At the same time the federal bureaucracy continues to expand, with that expansion fostered by stifling and costly regulations which dictate product design, specify the working environment, mandate to a degree the nature of the work force, and control, either by fiat or by guidelines, wages paid and prices asked. These same regulations disrupt the distribution of energy and distort its prices. Various tax laws frustrate the accumulation of capital and discourage the long-range industrial research and development and capital investment that would improve U.S. productivity and advance U.S. technological growth.

It has become fashionable in Washington to talk about a return to fiscal and monetary responsibility, combining this talk with similar talk of deregulation and balancing the cost of regulation with measurable benefits. To date, there has been a great deal more talk than action. We see no clear evidence that the

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basic philosophy of the federal government has begun to deviate from its present commitment to tax the productive sector and transfer income to the unproductive. In short, we see no evidence that the governmental policies which fuel ruinous inflation are being altered in any significant way.

THE TWO-SIDED COIN

Politics is a more powerful regulator of governmental activity than economic logic. The aim of the politician is to win next year's election, to perpetuate his own employment. But rational economic logic may dictate momentarily uncomfortable policies in order that the long-range health of the economy may improve.

As was observed in the *Wall Street Journal* recently, economic instability is like a coin with unemployment on one side and inflation on the other. No matter which side comes up, Washington wins: unemployment provides the rationale for deficit spending—the something-for-nothing logic that is the sustaining force behind inflation. The wise approach to unemployment would be to return the economy to a sound basis, control inflation, and encourage capital formation and investment. But no politician wants to stand idle in the face of unemployment. An idle worker is an angry worker. So Congress spends and inflation results.

When the inflation side of the coin comes up, Washington wins again. As the Congressional Joint Committee on Taxation has pointed out, inflation increases government income faster than it increases government expenses. If prices rise by 10%, government revenues go up by 16%.

BARRIERS TO COMPETITION

What we are really talking about in this abbreviated litany of government interventions in the economy is the continuing construction and maintenance of barriers to competition. These are not the non-tariff barriers we condemn so plaintively when other governments use them against us. They are barriers interposed by our *own* government. When international trade is concerned, ours is a government that urges business to "get in there and fight," but then ties its hands to limit the fight.

Too many people—both in and out of government—think the only competition worth talking about exists only within our own borders. However, in seven years we've been able to eke out only two balance of trade surpluses—a meager $9 billion in 1975 and a paltry $1 billion in 1973—and it seems logical to wonder whether there might not be some fairly formidable competitors beyond our own borders.

U.S. technological and marketing supremacy is not mandated by heaven, but this fact seems to be lost on our government, judging by the actions it has taken in discouraging competition. We are falling behind our foreign competitors in a variety of ways, especially in productivity and innovation. Since the middle 1960s, Japan and West Germany have recorded annual productivity increases of 6.8% and 5.3%, respectively. Our U.S. increase, meanwhile, has been 2.2%. Last year we showed virtually no gain at all.

Once, one-third of our industries' R&D spending went for basic research. Today it is less than one-sixth. More and more, U.S. business must confine itself to projects that will produce immediate results, to improvements in existing products rather than to the search for new ones. In 1960, 20% of U.S. patents were granted to foreign inventors. Today, foreign inventors win 37% of the total.

The experience of International Harvester demonstrates just why this is true. In the past, we ranked in profitability about in the middle of the companies competing for the various markets we are in—trucks, farm equipment, construction equipment, and industrial gas turbines. In approximately the last decade, our budgets for engineering have been almost entirely swallowed up in survival projects—meeting government-imposed requirements and developing the next line of products. There has been very little left for real innovation and quantum jumps in productivity for our customers. We are conscious of this and are quadrupling our basic engineering budgets. But in this hour of profit need—as has been demonstrated by Chrysler and the other major automotive concerns—it takes courage and perhaps some prayer.

DOES BUSINESS RESIST COMPETITION?

As a nation, the United States is failing to compete in the only kind of market it makes sense to talk about today: a world market. Instead, we worry more and more about exporting technology. We hear suggestions for added controls to halt the "brain drain." International Harvester began exporting technology in 1851, and we consider such exporting to be an integral part of effective international trade. We have helped to create our own competition abroad, and vying with it has kept us working to excel. We know there is just one response when your exported technology is used against you—to create new technology. The real problem is not that the U.S. exports too much technology, but that many U.S. companies do not compete effectively enough—at home or abroad.

It is legitimate to ask whether U.S. business really *wants* to compete. All too often, when business people seek favors in Washington, they are seeking protection from competition. When such favors are granted, the entire nation suffers from the inefficiency and ineptitude of enterprise that is in this way condoned and fostered.

It is equally legitimate to ask whether the American consumer, who stands to gain the most from it, really understands the function of competition and wants to preserve its freedom. Consider the number of pressure groups that support the ever-increasing control of government over the economic market—control that can only limit further the freedom to compete.

In the final analysis, the greatest power to take direct action, the greatest responsibility for serving the real interests of the nation as a whole, rests with

government. Its leadership is sorely needed if America is to become competitive again. Government encouragement and the incentives that are within its power to provide are essential if U.S. productivity and technology are once again to lead the world.

Two tables published recently illustrate the effect of present government corporate tax policy. One shows the effect of inflation on the corporate tax rate over a period of ten years through 1977. Contrary to a popular misconception of business as a user of loopholes to beat a basic 48% statutory tax rate, at no time in all that decade had the effective corporate tax rate been lower than 54% (in 1968). The ten-year average effective tax rate was 66.5%. When inflation rose to double digits in 1974, the effective corporate tax rate was an incredible 95%.

The second table responds to another popular misconception: that the decline in corporate income tax receipts as a percentage of total income tax receipts proves that business is improving its skill as a tax evader. What is readily apparent is that the declining percentage of corporate taxes relates *directly* to declining corporate profits as a percentage of national income. That percentage—above 13% in 1966—had dropped to 8.5% by 1970, to 7.4% in 1974, and had risen to only 9.2% in 1977, the most recent year covered.

The first table, of course, shows how inflation raises reported profits because the value of inventories is overstated and because depreciation allowances are insufficient to replace capital equipment at inflated prices. The second table shows that, even thus overstated, corporate profits have become a steadily declining factor in national income. This, I think, speaks volumes about the erosion of our freedom to compete. It is graphic testimony to the prevailing discouragement of the competitive impulse, which alone can lead to the productivity improvement and the technology advancement upon which America's future depends in a world market.

REMEDIES

One of the near-term remedies lies in one of the most constructive pieces of legislation to be introduced in Congress in a long time, the Capital Cost Recovery Act of 1979. It has been designed to streamline the depreciation rules, replacing the complex array of depreciation lifetime schedules that have been the bane of business—particularly smaller business—and that have made capital recovery in this country a far longer process than any faced by our foreign competitors.

Here in the U.S., an average of 28 years is required to write off a manufacturing building and an average of 12 years to depreciate equipment. By contrast, British companies can write off their entire capital investment in a single year. In Canada, such a write-off takes but two years. Why is the role of competition understood and valued more by the British and Canadian governments than by our own? Why are the Taiwanese looking to Japan for their model of effective free enterprise in action? These are questions all Americans should seriously ponder today.

The Capital Cost Recovery Act proposes three classes of depreciation lifetime for capital assets. Class I would provide ten years for depreciation of buildings. Class II would make five years the write-off period for equipment. Class III property would be a 6% credit instead of 3% as at present.

The proposed legislation falls short of placing U.S. business on an equal footing with its foreign competitors, but it is a tentative step in the right direction. It encourages the competitive spirit and provides a powerful incentive to escalate U.S. productivity and to advance U.S. technology.

However, the Capital Cost Recovery Act is not likely to pass simply because it is reasonable and rational and vital to this nation's return to economic health. It must have the active support of the entire business community. More than that, it must have all the support business can recruit among the consumers in this nation who will be the real beneficiaries of it.

THE AMERICAN ADVANTAGE

American business and industry can compete effectively with any nation in the international trade arena if its hands are not tied at the outset. We do have some things still in our favor. Labor costs in the United States are presently lower than those in West Germany and Scandanavia and not much higher than those in Japan, which are rising at a faster rate. The oil shortage and high prices, however much a problem to us, are more of a problem to Japan and Germany, which have no oil supplies.

The declining value of the dollar, a sad measure of our persistent inflation, nevertheless has the effect of making American goods more competitive than many foreign-made goods. In any event, one thing is certain: American business and industry must and can compete. The nation cannot continue to sustain trade deficits of the size we've had over the last seven years—the last two of which were $30 billion.

One further step would be immensely valuable in making America more competitive in international markets: a clearly articulated trade policy. The United States could learn from Japan about encouraging domestic industries to enter international markets—about providing incentives, about encouraging the research that will bear fruit in advanced technology that maximize the benefits of America's inventive genius.

The average American citizen must come to understand his stake in a vigorous effort by the United States in international markets. He does not yet really comprehend the disastrous consequences over the long run of federal policies that hinder free competition and industrial growth. We must all realize that the present Yankee Trader is not inferior to his 18th Century counterpart. His problem isn't a failure of will or a lack of ability but a failure of politics and a lack of national vision. These can be corrected if we are determined to do so.

COLORADO BUSINESS INDICATORS

(Figures in Thousands Unless Otherwise Indicated)

	December 1979	November 1979	December 1978	Percent Change December 1979 from November 1979	Percent Change December 1979 from December 1978
Total Civilian Labor Force (by place of residence)[a]	1,441.5	1,434.1r	1,379.7r	0.5	4.5
Unemployment	48.0	43.1r	50.3r	11.4	- 4.6
Unemployment Rate (percent)	3.3	3.0r	3.6r	—	—
Employment	1,393.5	1,391.0r	1,329.4r	0.2	4.8
Nonagricultural Wage and Salary	1,258.0	1,250.3r	1,195.4r	0.6	5.2
Agricultural	26.8	32.3	27.2	-17.0	- 1.5
Self-employed, unpaid family and domestics	108.7	108.4r	106.8r	0.3	1.8
Total Nonagricultural Wage and Salary Employment (by place of work)[a]	1,254.9	1,247.8r	1,195.4r	0.6	5.0
Mining	31.8	31.5r	28.6r	1.0	11.2
Metallic Minerals	10.5	10.5r	9.7r	0.0	8.2
Bituminous Coal, Lignite and Nonmetallic	5.9	5.8r	5.4r	1.7	9.3
Oil and Gas Extraction	15.3	15.1r	13.5r	1.3	13.3
Contract Construction	84.2	86.4r	72.9r	- 2.5	15.5
Manufacturing	183.5	183.6r	176.4r	- 0.1	4.0
Lumber, Wood Products and Furniture	7.9	8.1r	7.7r	- 2.5	2.6
Stone, Clay, Glass and Concrete Products	11.5	11.6r	10.6r	- 0.9	8.5
Primary and Fabricated Products	20.3	20.4r	20.3r	- 0.5	0.0
Machinery, Except Electrical	27.3	26.7r	24.8r	2.2	10.1
Electric and Electronic Equipment	15.5	15.3r	12.7r	1.3	22.0
Transportation Equipment	11.6	11.5r	11.0r	0.9	5.5
Other Durable Goods	24.2	24.3r	24.0r	- 0.4	0.8
Food and Kindred Products	24.9	25.3r	25.7r	- 1.6	- 3.1
Textiles and Apparel	3.9	3.9r	4.5r	0.0	13.3
Paper and Allied Products	2.0	2.1r	1.9r	- 4.8	5.3
Printing and Publishing	16.0	16.0r	15.1r	0.0	6.0
Chemicals and Allied Products	6.3	6.3r	6.1r	0.0	3.3
Other Nondurable Goods	11.9	12.1r	12.0r	- 1.7	- 0.8
Finance, Insurance and Real Estate	76.7	76.5r	71.2r	0.3	7.7
Banking	19.2	19.1r	17.9r	0.5	7.3
Credit Agencies and Other Banks	12.1	12.0r	11.1r	0.8	9.0
Insurance Carriers, Agents and Brokers	19.9	19.7r	18.7r	1.0	6.4
Real Estate and Combination Offices	21.6	21.8r	19.9r	- 0.9	8.5
Other Finance, Insurance and Real Estate	3.9	3.9r	3.6	0.0	8.3
Transportation and Public Utilities	77.9	78.2r	74.5r	- 0.4	4.6
Railroad Transportation	7.3	7.5	7.0	- 2.7	4.3
Trucking and Warehousing	17.3	17.4r	17.2r	- 0.6	0.6
Air Transportation	13.0	12.8r	12.0r	1.6	8.3
Other Transportation	5.8	5.7r	5.3r	1.8	9.4
Communications, Electric, Gas and Sanitary Services	34.5	34.7r	33.1r	- 0.6	4.2
Trade	311.0	304.8r	298.8r	1.7	3.7
Wholesale Trade	73.7	73.9r	68.4r	- 0.3	7.7
Retail Trade	236.3	230.9r	230.4r	2.3	2.6
Services	249.8	245.0r	232.4r	2.0	7.5
Lodging and Combination Lodging/Eating Places	21.6	21.0r	21.1r	2.9	2.4
Personal Services	12.8	12.6r	12.8r	1.6	0.0
Business Services	48.4	47.6r	41.7r	1.7	16.1
Auto and Miscellaneous Repair Services	14.2	14.1	12.7r	0.7	11.8
Amusements and Recreation	15.7	12.5r	15.4r	25.6	3.3
Health Services	62.6	62.5r	59.5r	0.2	5.2
Educational Services	9.3	9.4r	7.8r	- 1.1	19.2
Membership Organizations	21.1	21.0	20.7r	0.5	1.9
Other Services	44.1	44.2r	40.8r	- 0.2	8.1
Government	241.0	241.9r	240.5r	- 0.4	0.2
Federal	51.4	51.2r	51.0r	0.4	0.8
State	59.6	60.4r	58.9r	- 1.3	1.2
Local	130.0	130.2r	130.6r	- 0.2	- 0.5

	December 1979	November 1979	December 1978	Percent Change December 1979 from November 1979	Percent Change December 1979 from December 1978
Average Weekly Hours					
Construction	37.5	37.6r	36.8	- 0.3	1.9
Manufacturing	39.8	39.5	39.4	0.8	1.0
Nondurable Goods	38.8	38.4r	39.5	1.0	- 1.8
Durable Goods	40.5	40.1r	39.3	1.0	3.1
Average Weekly Earnings ($)					
Construction	379.50	378.26r	340.40	0.3	11.5
Manufacturing	277.01	273.73r	252.16	1.2	10.0
Nondurable Goods	271.21	265.34r	253.59	2.2	6.9
Durable Goods	281.47	278.29r	250.73	1.1	12.3
Initial Unemployment Claims (000)	14.7	14.0	15.6	5.0	- 5.8
Bankruptcies, All Types (number)	267	314	296	-15.0	- 9.8
Total State Revenue ($000)	219,244	285,195	202,988	-23.1	8.0
Total State Expenditures ($000)	246,907	253,054	209,148	- 2.4	18.1
Crude Oil Production (thous. bbls.)	2,647	2,608r	2,985	1.5	-11.3
Dry Gas Production (mil. cu. ft.)	13,338	12,491r	13,024	6.8	2.4
Coal Production (thous. tons)	1,717.7	1,405.4	1,281.1	22.2	34.1
New Oil and Gas Wells (number)	178	122	99	45.9	79.8
Natural Gas Used (bil. cu. ft.)	28.5	28.0	30.4	1.8	- 6.3
Electrical Power Sales (mil. kwh)					
Residential	569.0	455.0	531.5	25.1	7.1
Nonresidential	956.9	944.7	922.5	1.3	3.7
New Construction, 52 cities					
Residential permits (number)	972	825	1,143r	17.8	-15.0
Residential value ($000)	44,144	41,267	52,085r	7.0	-15.2
Nonresidential permits (number)	127	155	101r	-18.1	25.7
Nonresidential value ($000)	32,270	27,422	36,212r	17.7	-10.9
Highway Contractor Payments ($000)	9,052	14,298	6,450	-36.7	40.3
Ordinary Life Insurance Sales ($000)	634,446	448,683	515,236	41.4	23.1
Bank Deposits, 119 cities, 239 of 299 banks					
Demand ($000,000)	5,209	4,618	4,656r	12.8	11.9
Time and Savings ($000,000)	6,218	6,273	5,767r	- 0.9	7.8
Savings and Loan Net New Savings ($000)	54,632	40,897	74,159r	33.6	-26.3
National Park Visits (000)[b]	117.8	143.1	132.7	-17.7	-11.2
Motor Vehicle Title Applications (000)	60.2	91.6	85.2	-34.3	-29.3
Highway Vehicle Traffic Counts at Border Stations (daily average)	29,779	27,372	29,193	8.8	2.0
Air Passengers, Stapleton (000)[c]	1,753	1,521	1,653	15.3	6.0
Air Freight and Air Express, Stapleton (thous. lbs.)	20,231	21,963	21,624	- 7.9	- 6.4
Prices Received by Farmers ($)					
Beef Cattle (per cwt)	67.50	66.30	56.50	1.8	19.5
Lambs (per cwt)	66.10	62.30	61.50	6.1	7.5
Wheat (per bu.)	3.65	3.69r	2.79r	- 1.1	30.8
Corn (per bu.)	2.49	2.48r	2.15r	0.4	15.8
Potatoes (per cwt)	2.85	3.20	2.02	-10.9	41.1
Wool (per lb.)	.87	.86	.81	1.2	7.4

NOTES: An asterisk (*) indicates preliminary data subject to revision.
Revised data are marked (r).
n.r.—not reported

[a]Employment figures have been updated to a March 1979 benchmark and are arranged by 1972 Standard Industrial Classifications (SICs). Previously reported data were on a March 1977 benchmark. Thus, these data are not comparable to that published prior.

[b]Shadow Mountain National Recreation Area's visits are not included in these figures as this area is now administered by the U.S. Forest Service.

[c]Includes scheduled airlines, commuter airlines and charter passengers.

Employment, Hours, and Earnings data from Colorado Department of Labor and Employment.

Bankruptcies from the Office of the Federal Referee in Bankruptcy.

State Revenue and Expenditures from the State Controller's Office.

Crude Oil Production, Dry Gas Production and New Oil and Gas Wells from the Oil and Gas Conservation Commission.

Coal Production from Colorado State Coal Mine Inspection Department.

Natural Gas Used from Colorado Interstate Gas Company.

Electrical Power Sales from individual companies.

New Construction from individual cities.

Highway Contractor Payments from the Colorado Highway Department.

Life Insurance Sales from the Life Insurance Agency Management Sales Report.

Bank Deposits from individual banks.

Savings and Loan Net New Savings from Federal Home Loan Bank of Topeka.

National Park Visits from individual areas.

Highway Traffic counts from Colorado Highway Department.

Air Passengers, Freight, and Express from Stapleton International Airport Business Office.

Prices Received by Farmers from U.S. Department of Agriculture.

LOCAL BUSINESS CONDITIONS

(All Figures in Thousands)

	December 1979	November 1979	December 1978
ALAMOSA (1978 pop. 8,000)			
Electric Power (kwh) ...	3,539	2,977	3,222
Deposits ($)—Demand .	23,781	21,375	22,498
(2 of 2 banks)—T&S ..	18,026	18,212	16,187
Constr. ($)—Res.	30	0	150
—Nonres. ...	0	0	0
ARVADA (1979 pop. 85,300)			
Electric Power (kwh) ...	28,008	25,701	27,174
Deposits ($)—Demand .	42,399	40,535	37,217
(3 of 4 banks)—T&S ..	34,343	34,998	36,569
Constr. ($)—Res.	479	636	2,141
—Nonres. ...	0	371	3,710
ASPEN (1978 pop. 7,500)			
Electric Power (kwh) ...	5,728	4,431	5,421
Deposits ($)—Demand .	16,580	14,106	17,407
(1 of 2 banks)—T&S ..	21,606	22,911	21,953
Constr. ($)—Res.	0	0	0
—Nonres. ...	0	0	0
AURORA (1979 pop. 151,900)			
Electric Power (kwh) ...	72,584	64,988	67,218
Deposits ($)—Demand .	43,910	41,268	39,500
(4 of 9 banks)—T&S ..	57,452	56,820	51,303
Constr. ($)—Res.	8,177	5,382	16,031
—Nonres. ...	7,371	940	3,462
BOULDER (1979 pop. 90,900)			
Electric Power (kwh) ...	51,827	50,447	47,715
Deposits ($)—Demand .	153,590*	144,586*	144,132
(8 of 8 banks)—T&S ..	240,347	228,748	225,430
Constr. ($)—Res.	1,702	263	2,198
—Nonres. ...	1,975	900	731
BRIGHTON (1979 pop. 12,000)			
Electric Power (kwh) ...	4,627	3,859	4,243
Deposits ($)—Demand .	23,072	19,629	18,932
(2 of 2 banks)—T&S ..	26,673	28,532	22,586
Constr. ($)—Res.	90	1,904	187
—Nonres. ...	0	181	0
BROOMFIELD (1979 pop. 23,200)			
Electric Power (kwh) ...	11,027	7,926	9,629
Deposits ($)—Demand .	17,102	15,182	15,831
(2 of 2 banks)—T&S ..	22,873	23,118	21,549
Constr. ($)—Res.	181	540	699
—Nonres. ...	40	0	0
BRUSH (1978 pop. 4,200)[a]			
Electric Power (kwh) ...	2,136	1,939	2,069
Deposits ($)—Demand .	14,554	12,348	14,486
(2 of 2 banks)—T&S ..	32,892	33,225	26,322
CANON CITY (1978 pop. 14,215)			
Electric Power (kwh) ...	25,093	24,013	23,304
Deposits ($)—Demand .	21,724	20,998	21,016
(3 of 3 banks)—T&S ..	52,438	52,028	45,648
Constr. ($)—Res.	54	103	275
—Nonres. ...	0	20	0
COLORADO SPRINGS (1978 pop. 201,700)			
Electric Power (kwh) ...	151,893	148,947	150,347
Deposits ($)—Demand .	306,847	292,305	275,426
(13 of 17 banks)—T&S	443,117	448,424	411,221
Constr. ($)—Res.[b]	3,961	4,975	8,007
—Nonres. ...	3,502	3,250	4,157
COMMERCE CITY (1979 pop. 16,000)			
Electric Power (kwh) ...	15,201	24,734	26,181
Deposits ($)—Demand .	9,770	9,089	8,777
(1 of 1 bank)—T&S ...	12,357	14,088	9,511
Constr. ($)—Res.	43	264	104
—Nonres. ...	797	197	72
CORTEZ (1978 pop. 8,200)			
Electric Power (kwh) ...	3,562	3,400	3,564
Deposits ($)—Demand .	17,264	15,541	16,407
(2 of 2 banks)—T&S ..	31,186	31,489	28,699
Constr. ($)—Res.	158	142	188
—Nonres. ...	0	40	0
CRAIG (1977 pop. 6,677)			
Electric Power (kwh) ...	6,514	4,635	5,386
Deposits ($)—Demand .	18,889	22,504	18,719
(2 of 2 banks)—T&S ..	32,116	33,583	27,337
Constr. ($)—Res.	43	309	32
—Nonres. ...	11	17	0
DENVER (1979 pop. 527,800)			
Electric Power (kwh) ...	316,348	299,560	306,930
Deposits ($)—Demand .	2,760,286	2,317,237	2,407,943
(29 of 34 banks)—T&S	2,513,090	2,548,135	2,406,086
Constr. ($)—Res.	7,732	5,005	4,722
—Nonres. ...	10,310	6,264	20,198
DURANGO (1978 pop. 14,100)			
Electric Power (kwh) ...	7,090	6,370	7,976
Deposits ($)—Demand .	36,839	36,683	35,728
(3 of 3 banks)—T&S ..	54,656	53,593	50,058
Constr. ($)—Res.	111	134	42
—Nonres. ...	7	199	5
ENGLEWOOD (1979 pop. 33,000)			
Electric Power (kwh) ...	19,718	18,408	18,445
Deposits ($)—Demand .	131,152	117,358	110,469
(5 of 5 banks)—T&S ..	150,569	151,557	141,399
Constr. ($)—Res.	38	52	64
—Nonres. ...	490	82	57
ESTES PARK (1976 pop. 2,127)			
Electric Power (kwh) ...	5,047	4,176	4,849
Deposits ($)—Demand .	8,863	8,722	8,129
(2 of 2 banks)—T&S ..	18,677	19,183	16,772
Constr. ($)—Res.	0	1,249	82
—Nonres. ...	0	0	0
FORT COLLINS (1977 pop. 67,100)			
Electric Power (kwh) ...	52,516	28,333	33,513
Deposits ($)—Demand .	129,735	114,981	110,167
(6 of 6 banks)—T&S ..	196,525	196,781	185,636
Constr. ($)—Res.	3,474	5,748	3,054
—Nonres. ...	1,619	2,450	70
FORT MORGAN (1976 pop. 8,582)			
Electric Power (kwh) ...	8,270	6,698	n.r.
Deposits ($)—Demand .	23,960	21,929	23,244
(2 of 2 banks)—T&S ..	50,400	50,122	46,816
Constr. ($)—Res.	139	30	n.r.
—Nonres. ...	0	0	n.r.
GLENWOOD SPRINGS (1977 pop. 4,091)			
Electric Power (kwh) ...	4,264	4,605	4,140
Deposits ($)—Demand .	29,806	29,143	27,462
(2 of 2 banks)—T&S ..	53,301	54,971	48,130
Constr. ($)—Res.	300	n.r.	62
—Nonres. ...	85	n.r.	0
GOLDEN (1979 pop. 14,900)			
Electric Power (kwh) ...	5,861	5,647	6,058
Deposits ($)—Demand .	37,640	35,642	34,343
(2 of 2 banks)—T&S ..	62,995	62,381	51,394
Constr. ($)—Res.	1,207	195	140
—Nonres. ...	0	0	288
GRAND JUNCTION (1977 pop. 30,245)			
Electric Power (kwh) ...	17,055	15,916	14,723
Deposits ($)—Demand .	122,174	108,289	107,737
(5 of 5 banks)—T&S ..	154,029	154,747	124,923
Constr. ($)—Res.	859	1,703	485
—Nonres. ...	580	313	170
GREELEY (1977 pop. 58,900)			
Electric Power (kwh) ...	23,241	22,724	33,500
Deposits ($)—Demand .	104,970	98,523	99,653
(7 of 7 banks)—T&S ..	251,773	253,203	221,795
Constr. ($)—Res.	1,447	551	543
—Nonres. ...	690	567	0
GUNNISON (1978 pop. 6,000)			
Electric Power (kwh) ...	4,440	1,552	4,458
Deposits ($)—Demand .	15,598	14,168	14,059
(2 of 2 banks—T&S ..	21,591	22,163	18,636
Constr. ($)—Res.	0	22	0
—Nohres. ...	182	0	0
LA JUNTA (1976 pop. 8,700)			
Electric Power (kwh) ...	4,347	4,555	4,920
Deposits ($)—Demand .	20,335	18,539	17,979
(1 of 2 banks)—T&S ..	18,857	18,323	16,257
Constr. ($)—Res.	410	0	58
—Nonres. ...	0	2,761	0

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LOCAL BUSINESS CONDITIONS—Continued

	December 1979	November 1979	December 1978
LAKEWOOD (1979 pop. 134,400)			
Electric Power (kwh)	50,795	47,916	52,719
Deposits ($)—Demand	143,587*	140,873	142,881
(7 of 8 banks)—T&S	208,133*	214,164	198,958
Constr. ($)—Res.	2,387	3,319	2,026
—Nonres.	1,523	837	2,094
LAMAR (1976 pop. 8,500)			
Electric Power (kwh)	5,362	4,950	5,505
Deposits ($)—Demand	18,827	17,611	17,777
(2 of 2 banks)—T&S	27,566	27,325	20,535
Constr. ($)—Res.	0	35	50
—Nonres.	0	0	132
LITTLETON (1979 pop. 34,100)			
Electric Power (kwh)	17,166	16,420	17,383
Deposits ($)—Demand	58,279	53,003	58,175
(3 of 3 banks)—T&S	96,425	88,454	88,490
Constr. ($)—Res.	753	1,044	1,092
—Nonres.	0	753	0
LONGMONT (1979 pop. 45,200)			
Electric Power (kwh)	22,439	23,149	21,454
Deposits ($)—Demand	53,165	54,490	51,201
(4 of 5 banks)—T&S	89,698	88,061	85,820
Constr. ($)—Res.	3,059	1,534	1,891
—Nonres.	441	40	153
LOVELAND (1978 pop. 31,986)			
Electric Power (kwh)	17,113	17,680	17,300
Deposits ($)—Demand	44,258	43,363	41,513
(4 of 4 banks)—T&S	72,985	73,797	64,605
Constr. ($)—Res.	3,423	1,016	1,844
—Nonres.	112	156	10
MANITOU SPRINGS (1978 pop. 4,900)[c]			
Electric Power (kwh)	1,551	1,327	1,471
Deposits ($)—Demand	3,784	3,594	3,471
(1 of 1 bank)—T&S	6,356	6,459	5,996
MONTROSE (1976 pop. 8,500)[d]			
Deposits ($)—Demand	35,204	28,335	29,552
(2 of 3 banks)—T&S	43,038	42,602	37,382
Constr. ($)—Res.	108	267	22
—Nonres.	685	153	33
NORTHGLENN (1979 pop. 33,000)			
Electric Power (kwh)	10,978	9,992	10,489
Deposits ($)—Demand	21,332	23,226	18,302
(2 of 2 banks)—T&S	29,424	29,746	26,310
Constr. ($)—Res.	0	89	0
—Nonres.	735	4,700	6
PUEBLO (1976 pop. 105,000)			
Electric Power (kwh)	54,182	48,058	54,145
Deposits ($)—Demand	127,791	115,474	118,898
(7 of 8 banks)—T&S	180,366	182,587	168,248
Constr. ($)—Res.	198	833	1,621
—Nonres.	116	259	211
ROCKY FORD (1976 pop. 5,250)			
Electric Power (kwh)	5,920	4,991	5,811
Deposits ($)—Demand	8,324	8,281	8,780
(2 of 2 banks)—T&S	7,447	7,609	6,419
Constr. ($)—Res.	0	0	n.r.
—Nonres.	0	0	n.r.
SALIDA (1978 pop. 5,354)			
Electric Power (kwh)	1,802	1,576	1,779
Deposits ($)—Demand	11,285	10,103	10,872
(2 of 2 banks)—T&S	20,672	20,757	19,681
Constr. ($)—Res.	0	38	66
—Nonres.	0	0	0
STERLING (1978 pop. 11,500)			
Electric Power (kwh)	5,761	5,876	6,175
Deposits ($)—Demand	34,545	44,453	34,439
(3 of 3 banks)—T&S	74,410	79,587	63,815
Constr. ($)—Res.	0	74	75
—Nonres.	0	0	23
THORNTON (1979 pop. 37,000)			
Electric Power (kwh)	15,900	13,686	14,696
Deposits ($)—Demand	13,711	12,587	11,733
(1 of 1 bank)—T&S	8,040	8,235	9,157
Constr. ($)—Res.	332	409	1,639
—Nonres.	84	1,232	295
TRINIDAD (1976 pop. 10,000)			
Electric Power (kwh)	3,013	2,960	2,970
Deposits ($)—Demand	15,960	15,515	15,830
(2 of 2 banks)—T&S	25,870	25,452	22,301
Constr. ($)—Res.	35	0	22
—Nonres.	0	0	0
WALSENBURG (1976 pop. 4,600)			
Electric Power (kwh)	1,294	1,286	1,249
Deposits ($)—Demand	5,617	5,554	5,159
(1 of 1 bank)—T&S	12,348	12,597	11,197
Constr. ($)—Res.	0	0	14
—Nonres.	0	0	0
WESTMINSTER (1979 pop. 54,300)			
Electric Power (kwh)	18,912	16,572	16,592
Deposits ($)—Demand	32,233	29,865	30,544
(2 of 2 banks)—T&S	36,572	37,105	33,686
Constr. ($)—Res.	2,890	2,891	3,598
—Nonres.	33	303	631
WHEAT RIDGE (1979 pop. 38,000)			
Electric Power (kwh)	23,924	21,715	18,591
Deposits ($)—Demand	22,771	22,716	19,834
(2 of 2 banks)—T&S	30,680	31,098	29,701
Constr. ($)—Res.	46	87	0
—Nonres.	595	435	0

[a]Construction figures are not available.

[b]Regional figures.

[c]Included in Colorado Springs regional construction figures.

[d]Electric Power consumption figures are not available.

NOTES: Population figures are estimates from regional council of governments, and individual cities.
T&S—Time and Savings Deposits
Construction figures are valuation of new residential and nonresidential construction only.
n.r.—not reported
*—preliminary data
r—revised data

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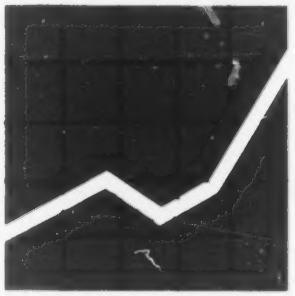

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Denver Safeway Versus King Soopers

HAROLD W. FOX

Rarely can the public catch a glimpse of proprietary research. One of those exceptional opportunities is the following study of Denver supermarket dynamics in the summer of 1977, originally prepared for The Sperry and Hutchinson Co. It was a year of prosperity; Safeway had recently opened in Denver the biggest of its new jumbo supermarket; consumers were increasingly responsive to nonprice incentives and the time seemed ripe for adoption of Green Stamps. No place seemed more appropriate than Denver, where 30 years ago King Soopers ignited the ardor for trading stamps that lasted for nearly two decades.

The present study is a platform for judging recent changes. Far from considering stamps, supermarkets in the early 1980s are battling chains of bantam-size stores and fast-food outlets for the consumer's food dollar. The dollar's purchasing power is shrinking. In three short years, prices of steak and gasoline have approximately doubled. Consumer attitudes toward thrift, comparison shopping, and menu selection are in a state of flux. The following article depicts Denver supermarkets on what turned out to be the brink of the current turmoil.

Two supermarket chains, King Soopers and Safeway, dominate food retailing in the Denver metropolitan area. These two chains amassed three-quarters of Denver's total dollar patronage in the ratio of 1.5:1, according to an impartial study conducted in 1977 by Marketing Information Service of Atlanta, Ga. (All interpretations and analyses in this article are solely the author's.) At the time of the survey, King Soopers' sales were growing very fast, Safeway's were steady, and others were declining.

What accounted for the superiority of King Soopers? Telephone interviews with the usual food shopper for 1,788 randomly selected households in the Denver metropolitan area yielded many insights into consumer attitudes and shopping patterns. These findings are projectable to the 350,000 households in the Denver metropolitan area. Studies of actual prices and newspaper advertisements of the supermarket chains supplemented this research. Data on Albertson's, the third-ranking chain in Denver, help put the statistics into perspective, although Albertson's market share was but 6%.

Analyzing first the attitudes of food shoppers and then their selection of stores, this report considers Denver's three leading supermarket chains on an equal basis. That is, each has a potential of 100% of the shoppers who consider themselves within reach of that chain.

CONSUMERS WITHIN REACH

The key concept in this research was to use the consumers' own demarcation of each chain's trading area instead of an arbitrary political boundary such as city of Denver. The findings about supermarkets emanated from food shoppers who identified the particular chains as being within their reach, the chains they could shop if they wanted to. Hence data on King Soopers, Safeway and Albertson's are comparable, despite the disparity in number of stores,

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since each chain has a trading area comprising 100% of its potential. Food retailers compete against each other to the extent that their trading areas overlap.

Interestingly, for both Safeway and King Soopers the trading area encompassed 75% of the households in the Denver metropolitan area. The overlap was, of course, very high, but the two chains attracted somewhat different segments. Safeway's customers were older and had lower incomes than the Denver average. Many were retired persons.

FOOD SHOPPERS' ATTITUDES

Perhaps Safeway's customers are more critical than the younger, employed, higher-income shoppers prevalent at Albertson's and King Soopers. Whatever the reason, only 19% of its customers rated Safeway superior on an overall basis. Eight percent rated it inferior. The corresponding ratings for Albertson's were 21% and 5%, respectively; King Soopers scored 42% superior and 0% inferior. See Table 1.

In addition to these composite ratings, shoppers also stated their opinions on several major elements of the grocery trade. Favorable ratings on 11 leading elements, given in Table 2, reveal some interesting patterns.

Customers and prospects of King Soopers liked its large variety of merchandise at everyday low prices. They appreciated its baked goods. Most other basic factors listed on Table 2 were within an acceptable range. King Soopers outscored Safeway 8:3 in terms of these basic elements.

TABLE 1
Composite Customer Ratings of Three Denver Supermarket Chains

Chain	Customer Ratings	
	Superior	Inferior
Albertson's	21%	5%
King Soopers	42	0
Safeway	19	8

The low showing of King Soopers on convenience (nearness to home) could indicate that many consumers were going out of their way to shop there. This would certainly be a compliment to King Soopers. Its rating on meats was below that of all tallied competitors, but Safeway did not exploit this weakness.

Indeed, on most of the basic elements listed in Table 2, Safeway was outpointed not only by King Soopers but also by Albertson's. As may be recalled, among their respective consumers within reach, Albertson's edged out Safeway on the composite ratings.

Table 2 shows that Albertson's ratings on many elements were quite respectable even relative to King Soopers. But apparently the elements on which Albertson's gained approbation did not influence the overall ratings as much as the elements on which King Soopers was favored.

TABLE 2
SUMMARY OF DENVER MARKET
CUSTOMER LIKES

SUPER-MARKET CHAIN	Convenience	Courteous Employees	Meats	Low Prices	Variety of Merchandise	Produce	Clean Stores	Brand Selection	Easy to Find Things	Bakery, Baked Goods	Special Sales
Albertson's	46%	29%	22%	19%	9%	20%	26%	3%	12%	6%	4%
Safeway	43	21	22	18	13	14	12	10	11	3	3
King Soopers	30	25	15	26	28	15	19	11	12	10	8

Composite ratings derive not only from the individual elements, but also from their combination. King Soopers "put it all together." King Soopers also may have benefited from a halo effect or other quirks of human thought processes. Support for this suspicion is discussed next.

The nuances of consumer cerebration are very complex and not fully understood. Apparently, an overall favorable impression can cause a blurring of individual characteristics such as price levels. Some consumers generalize the same opinion to all important factors, perhaps in a quest for cognitive consistency. A highly favorable rating not borne out by the facts could also be unwitting self-justification by people who prefer a retailer for other reasons. Still other researchers have found a price-quality association—a tendency to equate low prices with low quality or vice versa. Although the study's independent price audit showed little difference in prices at the chains, quality of meats and produce at King Soopers may have caused shoppers to impute a corresponding price level to goods throughout the store. There also is a threshold of perception: people do not notice picayune differences. Whatever theories appeal to the reader, they certainly provide ample explanation for disparities between rated and audited prices.

PRICES AND NEWSPAPER ADVERTISEMENTS

On July 14, 1977, professional researchers determined the actual prices of 160 identical goods in the three chains. When each item was considered as important as any other, the total spread between the lowest and the highest was less than 3%. Which chain was the lowest? Safeway.

The spread was narrower yet (a mere 1.7%) when each priced item was weighted the same as in the consumer price index. On this typical market basket, King Soopers was lower than Safeway by an imperceptible 0.3%. If the audit was representative, it seems fair to conclude that the near-alike price perceptions (see Table 2) for Albertson's and Safeway are more in accord with realities than the outstandingly favorable score for King Soopers.

Advertisements in local newspapers were the only type of promotion examined. During the first quarter of 1977, Safeway's linage was only three-quarters of King Soopers'. Readership for both chains was about equal; some 80% of the respective shoppers within reach checked the ads. Albertson's advertised much less; readership among its prospects was surprisingly low. Of course, to some extent, advertising levels reinforce readership levels.

Although speculation about theories of consumer attitudes, impact of advertisements, and accuracy of research is fascinating, the pragmatic issue here is what share of dollar patronage Denverites bestow on supermarkets within their reach.

PATRONAGE PATTERNS

Shopping choices are of three categories: (1) Consumers can make all or most of their purchases at a particular supermarket chain; (2) they can get a minority of their requirements there; (3) they can abstain.

The achievement of Denver's leader is overwhelming. Food shoppers from 90% of the households in its trading area made purchases at King Soopers. Three-quarters of these did most of their shopping at this chain. Altogether, King Soopers garnered from shoppers in its orbit a high 63% of their dollar patronage. This is an outstanding record, both by itself and compared to patterns in some other cities.

Safeway also attracted a high proportion of the households in its area: 80%. But only slightly more than one-half of its traffic was in the "shop most" category, which usually generates a supermarket's profit. Shoppers who "cherry-pick" just a few offerings are apt to buy the specials and the high-volume items on which margins are low. Safeway's share of dollar patronage among consumers within its reach was 46%.

Albertson's, despite its high ratings from consumers who could shop there, attracted only 69% of them and had many more fill-in than concentrated shoppers. Albertson's obtained only 27% of the food dollar from consumers within reach.

One wonders why Albertson's performance was so weak, both in generating traffic and in capturing the lion's share from those it did attract. Judging from the summary presented in Table 2, this chain interested many people to whom it was especially accessible, and they found the variety of its merchandise and its brand selection disappointing. But this is at best only a partial explanation. Additional research would be necessary to account for Albertson's performance and to suggest how it might be improved.

THE BATTLE CONTINUES

At the time of the study, Albertson's seemed to have the best opportunity of the three to boost its dollar patronage. Safeway was vulnerable because of its lower ratings on several leading elements of the business. Safeway and Albertson's competed head-on for 15% of all households in the Denver metropolitan area. Albertson's share of the food dollar was 27%—the same as its average for Denver shoppers from all trading areas.

Safeway seemed to face the challenge of upgrading its basic attractions in order to capture a higher proportion of the food dollar from its high traffic. But three-quarters of its trading area overlapped with King Soopers, which seemed impregnable. As long as Denverites are willing to go out of their way to King Soopers, the latter's operation is very efficient. If Safeway could match its attraction, or if travel times and gasoline became more decisive shopping criteria, King Soopers would need additional stores to retain and expand its patronage.

These findings and interpretations are necessarily tentative. Only a series of studies can show trends in consumer attitudes and actions. A new decade has brought new challenges. But the battle between Safeway and King Soopers for Denver shoppers continues.

COLORADO BUSINESS INDICATORS

(Figures in Thousands Unless Otherwise Indicated)

	January 1980	December 1979	January 1979	Percent Change January 1980 from December 1979	Percent Change January 1980 from January 1979
Total Civilian Labor Force (by place of residence)[a]	1,413.2	1,441.5	1,344.6	-2.0	5.1
Unemployment	48.5	48.0	49.2	1.0	- 1.4
Unemployment Rate (percent)	3.4	3.3	3.7	—	—
Employment	1,369.8	1,393.5	1,295.4	- 1.7	5.7
Nonagricultural Wage and Salary	1,238.3	1,258.0	1,172.0	- 1.6	5.7
Agricultural	23.6	26.8	20.4	-11.9	15.7
Self-employed, unpaid family and domestics	107.9	108.7	103.0	- 0.7	4.8
Total Nonagricultural Wage and Salary Employment (by place of work)[a]	1,232.7	1,254.9	1,171.7	- 1.8	5.2
Mining	31.7	31.8	28.4	- 0.3	11.6
Metallic Minerals	10.5	10.5	9.7	0.0	8.3
Lignite and Nonmetallic	5.8	5.9	5.3	- 1.7	9.4
Oil and Gas Extraction	15.5	15.3	13.4	1.3	15.7
Contract Construction	79.4	84.2	68.2	- 5.7	16.4
Manufacturing	182.9	183.5	175.1	- 0.3	4.5
Lumber, Wood Products and Furniture	7.6	7.9	7.5	- 3.8	1.3
Stone, Clay, Glass and Concrete Products	11.4	11.5	10.7	- 0.9	6.5
Primary and Fabricated Metals	20.2	20.3	19.8	- 0.5	2.0
Machinery, Except Electrical	27.7	27.3	24.8	1.5	11.7
Electric and Electronic Equipment	15.6	15.5	12.5	0.7	24.8
Transportation Equipment	11.7	11.6	11.1	0.9	5.4
Other Durable Goods	24.0	24.2	23.9	- 0.8	0.4
Food and Kindred Products	24.8	24.9	25.6	- 0.4	- 3.1
Textiles and Apparel	3.6	3.9	3.9	- 7.7	- 7.7
Paper and Allied Products	2.1	2.0	1.9	5.0	10.5
Printing and Publishing	16.0	16.0	15.1	0.0	6.0
Chemicals and Allied Products	6.4	6.3	6.2	1.6	3.2
Other Nondurable Goods	11.8	11.9	12.0	- 0.8	- 1.7
Finance, Insurance and Real Estate	77.0	76.7	71.4	0.4	7.8
Banking	19.3	19.2	17.9	0.5	7.8
Credit Agencies Other than Banks	12.1	12.1	11.0	0.0	10.0
Insurance Carriers, Agents and Brokers	19.9	19.9	18.6	0.0	7.0
Real Estate and Combination Offices	21.9	21.6	20.2	1.4	8.4
Other Finance, Insurance and Real Estate	3.9	3.9	3.6	0.0	8.3
Transportation and Public Utilities	75.4	77.9	73.0	- 3.2	3.3
Railroad Transportation	7.4	7.3	6.8	1.4	8.8
Trucking and Warehousing	15.7	17.3	15.6	- 9.2	0.6
Air Transportation	13.0	13.0	12.3	0.0	5.7
Other Transportation	5.8	5.8	5.3	0.0	9.4
Communications, Electric, Gas and Sanitary Services	33.5	34.5	33.0	- 2.9	1.5
Trade	301.0	310.0	289.6	- 2.9	3.9
Wholesale Trade	73.4	73.7	68.0	- 0.4	7.9
Retail Trade	227.6	236.3	221.6	- 3.7	2.7
Services	249.7	249.8	232.1	- 0.0	7.6
Lodging and Combination Lodging/Eating Places	21.8	21.6	21.2	0.9	2.8
Personal Services	13.0	12.8	13.5	1.6	- 3.7
Business Services	47.2	48.4	41.0	- 2.5	15.1
Auto and Miscellaneous Repair Services	14.3	14.2	13.0	0.7	10.0
Amusements and Recreation	16.5	15.7	15.3	5.1	7.8
Health Services	62.8	62.6	59.8	0.3	5.0
Educational Services	9.1	9.3	7.8	- 2.2	16.7
Membership Organizations	20.9	21.1	20.5	- 0.9	2.0
Other Services	44.0	44.1	40.0	- 0.2	10.0
Government	235.5	241.0	234.0	- 2.3	0.6
Federal	51.6	51.4	49.8	0.4	3.6
State	55.6	59.6	55.2	- 6.7	0.7
Local	128.3	130.0	129.0	- 1.3	- 0.5

	January 1980	December 1979	January 1979	Percent Change January 1980 from December 1979	Percent Change January 1980 from January 1979
Average Weekly Hours					
Construction	37.8	37.5	35.7	0.8	5.9
Manufacturing	39.2	39.8	39.2	- 1.5	0.0
Nondurable Goods	38.3	38.8	40.4	- 1.3	- 5.2
Durable Goods	39.8	40.5	38.4	- 1.7	3.7
Average Weekly Earnings ($)					
Construction	386.98	379.50	332.72	2.0	16.3
Manufacturing	273.50	277.01	254.41	- 1.3	7.5
Nondurable Goods	262.14	271.21	265.43	- 3.3	- 1.2
Durable Goods	280.69	281.47	246.91	- 0.3	13.7
Initial Unemployment Claims (000)	19.4	14.7	18.2	32.0	6.6
Bankruptcies, All Types (number)	353	267	257	32.2	37.4
Total State Revenue ($000)	264,783	219,244	303,242	20.8	-12.7
Total State Expenditures ($000)	259,729	246,907	231,141	5.2	12.4
Crude Oil Production (thous. bbls.)	2,530	2,624r	2,871r	- 3.6	-11.9
Dry Gas Production (mil. cu. ft.)	11,726	13,431r	13,142r	-12.7	-10.8
Coal Production (thous. tons)	1,532.4	1,717.7	1,386.7r	-10.8	10.5
New Oil and Gas Wells (number)	128	178	62	-28.1	106.5
Natural Gas Used (bil. cu. ft.)	31.5	28.5	32.5	10.5	- 3.1
Electrical Power Sales (mil. kwh)					
Residential	586.1	569.0	599.0	3.0	- 2.2
Nonresidential	915.0	956.9	928.1	- 4.4	- 1.4
New Construction, 51 cities					
Residential permits (number)	689	972	1,034	-29.1	-33.4
Residential value ($000)	29,704	44,144	42,239	-32.7	-29.7
Nonresidential permits (number)	115	127	119	- 9.4	- 3.4
Nonresidential value ($000)	37,870	32,270	31,438	17.4	20.5
Highway Contractor Payments ($000)	n.r.	9,052	6,700	—	—
Ordinary Life Insurance Sales ($000)	404,917	634,446	339,712	-36.2	19.2
Bank Deposits, 119 cities, 247 of 299 banks					
Demand ($000,000)	4,407	5,294	4,186	-16.8	5.3
Time and Savings ($000,000)	6,334	6,344	5,838	- 0.2	8.5
Savings and Loan Net New Savings ($000)	19,618	54,632	56,239	-64.1	-65.1
National Park Visits—9 areas (000)[b]	97.7	117.8	110.2r	-17.1	-11.3
Motor Vehicle Title Applications (000)	67.1	60.2	73.9	11.5	- 9.2
Highway Vehicle Traffic Counts at Border Stations (daily average)	23,404	29,779	24,889	-21.4	- 6.0
Air Passengers, Stapleton (000)[c]	1,713	1,753	1,627	- 2.3	5.3
Air Freight and Air Express, Stapleton (thous. lbs.)	20,850	20,231	19,879	3.1	4.9
Prices Received by Farmers ($)					
Beef Cattle (per cwt)	65.00	67.50	59.80	- 3.7	8.7
Lambs (per cwt)	66.90	66.10	74.50	1.2	-10.2
Wheat (per bu.)	3.68	3.72r	2.74	- 1.1	34.3
Corn (per bu.)	2.38	2.49	2.07	- 4.4	15.0
Potatoes (per cwt)	2.85	2.85	2.35	0.0	21.3
Wool (per lb.)	.89	.87	.85	2.3	4.7

NOTES: An asterisk (*) indicates preliminary data subject to revision.
Revised data are marked (r).
n.r.—not reported

[a]Employment figures have been updated to a March 1979 benchmark and are arranged by 1972 Standard Industrial Classifications (SIC's). Previously reported data was on March 1978 benchmark. Thus, this data is not comparable to that published prior.

[b]Shadow Mountain National Recreation Area's visits are not included in these figures as this area is now administered by the U.S. Forest Service.

[c]Includes scheduled airlines, commuter airlines and charter passengers.

Employment, Hours, and Earnings data from Colorado Department of Labor and Employment.

Bankruptcies from the Office of the Federal Referee in Bankruptcy.

State Revenue and Expenditures from the State Controller's Office.

Crude Oil Production, Dry Gas Production and New Oil and Gas Wells from the Oil and Gas Conservation Commission.

Coal Production from Colorado State Coal Mine Inspection Department.

Natural Gas Used from Colorado Interstate Gas Company.

Electrical Power Sales from individual companies.

New Construction from individual cities.

Highway Contractor Payments from the Colorado Highway Department.

Life Insurance Sales from the Life Insurance Agency Management Sales Report.

Bank Deposits from individual banks.

Savings and Loan Net New Savings from Federal Home Loan Bank of Topeka.

National Park Visits from individual areas.

Highway Traffic counts from Colorado Highway Department.

Air Passengers, Freight, and Express from Stapleton International Airport Business Office.

Prices Received by Farmers from U.S. Department of Agriculture.

LOCAL BUSINESS CONDITIONS

(All Figures in Thousands)

	January 1980	December 1979	January 1979
ALAMOSA (1978 pop. 8,000)			
Electric Power (kwh) ...	3,319	3,539	3,718
Deposits ($)—Demand .	20,721	23,781	20,797
(2 of 2 banks)—T&S ..	18,547	18,026	15,789
Constr. ($)—Res.	0	30	0
—Nonres. ...	0	0	0
ARVADA (1979 pop. 85,300)			
Electric Power (kwh) ...	28,406	28,008	28,456
Deposits ($)—Demand .	33,942	42,399	34,005
(3 of 4 banks)—T&S ..	33,831	34,343	34,593
Constr. ($)—Res.	483	479	1,378
—Nonres. ...	0	0	190
ASPEN (1978 pop. 7,500)			
Electric Power (kwh) ...	7,323	5,728	7,347
Deposits ($)—Demand .	18,668	16,580	17,831
(1 of 2 banks)—T&S ..	22,186	21,606	22,532
Constr. ($)—Res.	0	0	0
—Nonres. ...	0	0	0
AURORA (1979 pop. 151,900)			
Electric Power (kwh) ...	72,552	72,584	68,705
Deposits ($)—Demand .	39,899	43,910	35,920
(4 of 9 banks)—T&S ..	57,013	57,452	53,124
Constr. ($)—Res.	2,482	8,177	6,507
—Nonres. ...	2,927	7,371	825
BOULDER (1979 pop. 90,900)			
Electric Power (kwh) ...	44,885	51,827	50,250
Deposits ($)—Demand .	134,781*	153,591	138,630c
(7 of 8 banks)—T&S ..	222,803*	240,347	226,954c
Constr. ($)—Res.	n.r.	1,702	916
—Nonres. ...	n.r.	1,975	1,041
BRIGHTON (1979 pop. 12,000)			
Electric Power (kwh) ...	4,433	4,627	4,530
Deposits ($)—Demand .	22,340	23,072	17,645
(2 of 2 banks)—T&S ..	25,515	26,673	26,057
Constr. ($)—Res.	216	90	165
—Nonres. ...	100	0	0
BROOMFIELD (1979 pop. 23,200)			
Electric Power (kwh) ...	7,036	11,027	9,297
Deposits ($)—Demand .	n.r.	17,102	13,162
(2 of 2 banks)—T&S ..	n.r.	22,873	20,974
Constr. ($)—Res.	1,203	181	2,137
—Nonres. ...	93	40	120
BRUSH (1978 pop. 4,200)a			
Electric Power (kwh) ...	2,256	2,136	2,160
Deposits ($)—Demand .	10,792	14,554	11,295
(2 of 2 banks)—T&S ..	32,828	30,892	26,366
CANON CITY (1978 pop. 14,215)			
Electric Power (kwh) ...	23,848	25,093	23,430
Deposits ($)—Demand .	21,695	21,724	21,099
(3 of 3 banks)—T&S ..	53,112	52,438	45,822
Constr. ($)—Res.	225	54	308
—Nonres. ...	38	0	25
COLORADO SPRINGS (1978 pop. 201,700)			
Electric Power (kwh) ...	156,608	151,893	158,017
Deposits ($)—Demand .	275,535	315,400	258,257
(15 of 17 banks)—T&S	449,928	450,283	424,102
Constr. ($)—Res.b	5,625	3,960	6,814
—Nonres ...	18,571	3,502	4,424
COMMERCE CITY (1979 pop. 16,000)			
Electric Power (kwh) ...	18,095	15,201	20,851
Deposits ($)—Demand .	10,233	9,770	8,667
(1 of 1 bank)—T&S ...	12,928	12,357	9,501
Constr. ($)—Res.	20	43	232
—Nonres. ...	85	797	529
CORTEZ (1978 pop. 8,200)			
Electric Power (kwh) ...	n.r.	3,562	4,356
Deposits ($)—Demand .	15,302	17,264	15,245
(2 of 2 banks)—T&S ..	31,257	31,186	28,410
Constr. ($)—Res.	91	158	33
—Nonres. ...	0	0	0
CRAIG (1977 pop. 6,677)			
Electric Power (kwh) ...	6,100	6,514	6,257
Deposits ($)—Demand .	18,335	18,889	16,773
(2 of 2 banks)—T&S ..	31,172	32,116	27,639
Constr. ($)—Res.	0	43	211
—Nonres. ...	42	11	164
DENVER (1979 pop. 527,800)			
Electric Power (kwh) ...	304,348	316,348	311,606
Deposits ($)—Demand .	2,204,632	2,803,445	2,077,883
(31 of 34 banks)—T&S	2,563,854	2,595,309	2,416,723
Constr. ($)—Res.	5,046	7,732	4,872
—Nonres. ...	5,655	10,310	12,188
DURANGO (1978 pop. 14,100)			
Electric Power (kwh) ...	7,222	7,090	7,335
Deposits ($)—Demand .	33,839	36,839	32,386
(3 of 3 banks)—T&S ..	55,788	54,656	50,189
Constr. ($)—Res.	0	111	0
—Nonres. ...	217	7	0
ENGLEWOOD (1979 pop. 33,000)			
Electric Power (kwh) ...	18,924	19,718	20,476
Deposits ($)—Demand .	108,345	131,152	101,427
(5 of 5 banks)—T&S ..	155,518	150,569	141,381
Constr. ($)—Res.	84	38	41
—Nonres. ...	551	490	61
ESTES PARK (1976 pop. 2,127)			
Electric Power (kwh) ...	5,034	5,047	5,648
Deposits ($)—Demand .	8,060	8,863	7,262
(2 of 2 banks)—T&S ..	17,846	18,677	16,843
Constr. ($)—Res.	0	0	208
—Nonres. ...	0	0	261
FORT COLLINS (1977 pop. 67,100)			
Electric Power (kwh) ...	61,523	52,516	35,794
Deposits ($)—Demand .	112,538	129,735	98,259
(6 of 6 banks)—T&S ..	200,733	196,525	187,360
Constr. ($)—Res.	3,158	3,474	2,429
—Nonres. ...	456	1,619	0
FORT MORGAN (1976 pop. 8,582)			
Electric Power (kwh) ...	9,261	8,270	8,847
Deposits ($)—Demand .	20,418	23,960	19,458
(2 of 2 banks)—T&S ..	51,934	50,400	47,922
Constr. ($)—Res.	49	139	103
—Nonres. ...	0	0	0
GLENWOOD SPRINGS (1977 pop. 4,091)			
Electric Power (kwh) ...	4,556	4,264	4,806
Deposits ($)—Demand .	25,996	29,806	25,065
(2 of 2 banks)—T&S ..	55,686	53,301	57,586
Constr. ($)—Res.	41	300	40
—Nonres. ...	95	85	0
GOLDEN (1979 pop. 14,900)			
Electric Power (kwh) ...	5,750	5,861	6,056
Deposits ($)—Demand .	36,151	37,640	33,011
(2 of 2 banks)—T&S ..	62,108	62,995	51,379
Constr. ($)—Res.	1,398	1,207	55
—Nonres. ...	0	0	0
GRAND JUNCTION (1977 pop. 30,245)			
Electric Power (kwh) ...	15,857	17,056	15,902
Deposits ($)—Demand .	101,060	122,174	92,690
(5 of 5 banks)—T&S ..	158,720	154,029	132,287
Constr. ($)—Res.	321	859	564
—Nonres. ...	720	580	49
GREELEY (1977 pop. 58,900)			
Electric Power (kwh) ...	23,422	23,241	21,420
Deposits ($)—Demand .	93,929	104,970	87,375
(7 of 7 banks)—T&S ..	253,879	251,773	224,142
Constr. ($)—Res.	952	1,447	672
—Nonres. ...	1,875	690	3,061
GUNNISON (1978 pop. 6,000)			
Electric Power (kwh) ...	4,342	4,440	4,679
Deposits ($)—Demand .	14,696	15,598	13,469
(2 of 2 banks)—T&S ..	22,322	21,591	18,572
Constr. ($)—Res.	0	0	0
—Nonres. ...	0	0	0
LA JUNTA (1976 pop. 8,700)			
Electric Power (kwh) ...	4,527	4,347	4,018
Deposits ($)—Demand .	16,621	20,335	15,689
(1 of 2 banks)—T&S ..	20,071	18,857	15,964
Constr. ($)—Res.	25	410	26
—Nonres. ...	0	0	0

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LOCAL BUSINESS CONDITIONS—Continued

	January 1980	December 1979	January 1979
LAKEWOOD (1979 pop. 134,400)			
Electric Power (kwh) ...	52,846	50,795	53,865
Deposits ($)—Demand .	135,656	143,587	138,537[f]
(6 of 8 banks)—T&S ..	209,706	208,133	200,419[f]
Constr. ($)—Res.	1,315	2,387	2,430
—Nonres. ...	1,848	1,523	2,128
LAMAR (1976 pop. 8,500)			
Electric Power (kwh) ...	5,461	5,362	5,685
Deposits ($)—Demand .	15,938	18,827	16,812
(2 of 2 banks)—T&S ..	27,516	27,566	20,711
Constr. ($)—Res.	12	0	0
—Nonres. ...	0	0	30
LITTLETON (1979 pop. 34,100)			
Electric Power (kwh) ...	16,560	17,166	16,979
Deposits ($)—Demand .	51,293	58,279	49,519
(3 of 3 banks)—T&S ..	96,581	96,425	85,346
Constr. ($)—Res.	1,278	753	428
—Nonres. ...	103	0	136
LONGMONT (1979 pop. 45,200)			
Electric Power (kwh) ...	21,300	22,439	22,550
Deposits ($)—Demand .	49,791	54,953	50,252
(5 of 5 banks)—T&S ..	92,862	92,346	87,981
Constr. ($)—Res.	377	3,059	857
—Nonres. ...	468	441	357
LOVELAND (1978 pop. 31,986)			
Electric Power (kwh) ...	16,520	17,113	17,300
Deposits ($)—Demand .	38,642	44,258	40,211
(4 of 4 banks)—T&S ..	72,615	72,985	64,877
Constr. ($)—Res.	1,890	3,423	1,475
—Nonres. ...	1,939	112	422
MANITOU SPRINGS (1978 pop. 4,900)[c]			
Electric Power (kwh) ...	1,490	1,551	1,707
Deposits ($)—Demand .	3,166	3,784	3,278
(1 of 1 bank)—T&S ...	6,252	6,356	5,994
MONTROSE (1976 pop. 8,500)[d]			
Deposits ($)—Demand .	28,548	35,204	24,958
(2 of 2 banks)—T&S ..	43,860	43,038	37,669
Constr. ($)—Res.	97	108	0
—Nonres. ...	1,329	685	25
NORTHGLENN (1979 pop. 33,000)			
Electric Power (kwh) ...	10,417	10,978	11,558
Deposits ($)—Demand .	22,016	21,332	20,968
(2 of 2 banks)—T&S ..	28,591	29,424	26,270
Constr. ($)—Res.	0	0	0
—Nonres. ...	157	735	0
PUEBLO (1976 pop. 105,000)			
Electric Power (kwh) ...	57,595	54,182	57,877
Deposits ($)—Demand .	119,812	129,148	109,979
(8 of 8 banks)—T&S ..	186,751	182,449	170,357
Constr. ($)—Res.	463	198	1,481
—Nonres. ...	74	116	224
ROCKY FORD (1976 pop. 5,250)			
Electric Power (kwh) ...	5,956	5,920	6,003
Deposits ($)—Demand .	7,444	8,324	8,046
(2 of 2 banks)—T&S ..	7,948	7,447	6,464
Constr. ($)—Res.	0	0	33
—Nonres. ...	0	0	0
SALIDA (1978 pop. 5,354)			
Electric Power (kwh) ...	1,781	1,802	1,922
Deposits ($)—Demand .	10,116	11,285	9,932
(2 of 2 banks)—T&S ..	21,308	20,672	18,432
Constr. ($)—Res	58	0	126
—Nonres. ...	0	0	0
STERLING (1978 pop. 11,500)			
Electric Power (kwh) ...	5,576	5,761	6,609
Deposits ($)—Demand .	34,299	34,545	30,804
(3 of 3 banks)—T&S ..	76,878	74,410	65,622
Constr. ($)—Res.	72	0	43
—Nonres. ...	0	0	0
THORNTON (1979 pop 37,000)			
Electric Power (kwh) ...	16,772	15,900	17,189
Deposits ($)—Demand .	11,057	13,711	10,553
(1 of 1 bank)—T&S ...	9,402	8,040	8,905
Constr. ($)—Res.	n.r.	332	1,484
—Nonres. ...	n.r.	84	0
TRINIDAD (1976 pop. 10,000)			
Electric Power (kwh) ...	3,104	3,013	3,045
Deposits ($)—Demand .	15,520	15,960	15,517
(2 of 2 banks)—T&S ..	26,053	25,870	22,411
Constr. ($)—Res.	0	35	120
—Nonres. ...	0	0	0
WALSENBURG (1976 pop. 4,600)			
Electric Power (kwh) ...	1,430	1,294	1,627
Deposits ($)—Demand .	5,483	5,617	5,119
(1 of 1 bank)—T&S ...	12,386	12,348	11,307
Constr. ($)—Res.	90	0	0
—Nonres. ...	12	0	51
WESTMINSTER (1979 pop. 54,300)			
Electric Power (kwh) ...	19,054	18,912	17,020
Deposits ($)—Demand .	28,863	32,233	27,413
(2 of 2 banks)—T&S ..	38,358	36,572	33,252
Constr. ($)—Res.	2,200	2,890	4,450
—Nonres. ...	455	33	4,616
WHEAT RIDGE (1979 pop. 38,000)			
Electric Power (kwh) ...	22,320	23,924	21,204
Deposits ($)—Demand .	20,787	22,771	18,526
(2 of 2 banks)—T&S ..	30,680	30,680	30,090
Constr. ($)—Res.	46	46	0
—Nonres. ...	62	595	0

[a]Construction figures are not available.
[b]Regional figures.
[c]Included in Colorado Springs regional construction figures.
[d]Electric Power consumption figures are not available.
[e]Eight banks reported during this period.
[f]Seven banks reported during this period.

NOTES: Population figures are estimates from regional council of governments, and individual cities.
T&S—Time and Savings Deposits
Construction figures are valuation of new residential and nonresidential construction only.
n.r.—not reported
*—preliminary data
r—revised data